

## Comments on the Effects of Workers' Selfmanagement on Yugoslav Joint Ventures

Howard M. Liebman

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# COMMENTS ON THE EFFECTS OF WORKERS' SELF-MANAGEMENT ON YUGOSLAV JOINT VENTURES

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## I. INTRODUCTION

In a thoughtful analysis published in a recent issue of the *Journal of World Trade Law*, Professor Cletus Coughlin undertook an economic overview of the joint venture legislation in Yugoslavia in light of a relatively disappointing foreign response.<sup>1</sup> In particular, Professor Coughlin noted the inherent difficulty in attempting to integrate the Yugoslav system of workers' self-management with the management rights of foreign entity participants.<sup>2</sup> Problems particularly have arisen when the workers' representatives on a joint venture's works council

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1. Coughlin, *An Economic Analysis of Yugoslav Joint Ventures*, 17 J. WORLD TRADE L. 12 (1983).

2. *Id.* at 15.

have continually frustrated the plans or proposals of the foreign management representatives,<sup>3</sup> perhaps because of the different economic goals of a Yugoslav worker and a Western capitalist investor.<sup>4</sup>

This motivational gap is illustrated by an analysis borrowed from one observer<sup>5</sup> that the foreign investor will aim to maximize profits whereas the Yugoslav worker representatives will prefer to maximize income per worker. As a result, "the Yugoslav partner will desire to employ less labor than would the Western partner."<sup>6</sup> Professor Coughlin notes that although the assumption on which this conclusion is based is frequently made, it is not entirely satisfactory, but then concludes that there is some logical support for it.<sup>7</sup> His ultimate conclusion, however, is that "a deeper understanding of the interrelationships between the legislation and certain economic results is possible" and that, "[a]s always, there is more research to be done."<sup>8</sup>

This comment will expand on Professor Coughlin's remarks by analyzing in greater depth the assumption of a motivational gap between Western and Yugoslav joint venture partners, particularly regarding employment and production levels and investment preferences or biases.<sup>9</sup> It is hoped that these observations, albeit theoretical and primarily economic in nature, may further the research efforts Professor Coughlin called for to bring law and practice into closer harmony.

## II. METHODOLOGY

In order to examine the effects of workers' self-management on the behavior of a joint venture firm, I have attempted to place the joint

3. *Id.* at 16. *But see* Euromarket News (CCH) No. 817, Rep. No. 509, at 8 (Sept. 11, 1984) (reporting on proposals to amend Yugoslav joint venture legislation to help alleviate certain problems perceived as inhibiting Western joint venture equity participation).

4. *Id.* at 23.

5. Brada, *Markets, Property Rights, and the Economics of Joint Ventures in Socialist Countries*, 1 J. COMP. ECON. 167 (1977), *cited in* Coughlin, *supra* note 1, at 23.

6. *Id.*

7. *Id.* In a subsequent comment, two other observers pointed out that the goals or objectives of actual Western investors are even more diverse than might otherwise be assumed. Artisien & Buckley, *Joint Ventures in Yugoslavia: Comment*, 18 J. WORLD TRADE L. 163, 164-65 (1984).

8. Brada, *supra* note 5, at 21.

9. This article will not discuss the Yugoslav joint venture legislation itself. For an historical perspective on that subject, see Djuricic, *Tax and Legal Aspects of Joint Ventures Under Yugoslav Law*, 73-79 TAX MGMT. INT'L J. 9 (1973). *See generally* Zoubek, *Joint Ventures in East Europe*, 9 J. WORLD TRADE L. 427 (1975); Sukijasovic, *Legal Aspects of Foreign Investment in Yugoslavia*, in EAST-WEST TRADE 82 (K. Grzybowski ed. 1973).

venture firm within a control context by comparing it to firms operating without self-management but in a similar economic framework. I have done so because the extensive research done on comparing workers' self-management with both pure capitalism (which only exists in theory) and economic systems using rigid central planning yields the most valid results when it does not take into account the influence of other factors, some of which may be derivatives of the Yugoslav market socialist system.

For purposes of a comparison, I have therefore chosen as a "control" the Hungarian economic system embodied in the New Economic Mechanism ("NEM"),<sup>10</sup> since both the NEM and Yugoslav systems are set in a market socialism framework. But for the presence of workers' self-management in Yugoslavia, the differences between the two are in degree rather than in kind.

### III. THE MARKET SOCIALIST MODEL

Some background discussion of the theory behind market socialism itself is necessary to make the comparison suggested above and to analyze the factors which affect the structure of workers' self-management. Market socialism has been described as being comprised of "(1) public ownership and (2) limited inequity in income distribution with (3) the use of markets and prices to allocate resources and goods."<sup>11</sup> The first two elements are, of course, basic to any socialist theory and are derived from normative judgments of ethical and social values.<sup>12</sup> Socialist philosophers and economists also assume that these two elements increase global social welfare and reduce the negative aspects of market imperfections.<sup>13</sup> However, insofar as these two conditions may foster rapid economic growth, it is not necessarily because they contribute to an inherently more efficient form of economic organization. Rather, theorists believe that they result in a positive impact on worker satisfaction and hence productivity.<sup>14</sup> The third factor, the introduction

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10. See Liebman, Book Review, 16 HARV. INT'L L. J. 772 (1975).

11. Bornstein, *Socialist Market Economy*, in *COMPARATIVE ECONOMIC SYSTEMS: MODELS AND CASES* 60 (M. Bornstein ed. 1969) [hereinafter cited as *COMPARATIVE ECONOMIC SYSTEMS*].

12. See generally *MARXIST SOCIAL THOUGHT* (R. Freedman ed. 1968).

13. For example, Lerner states: "If it is impossible, on any division of income, to discover which of any two individuals has a higher marginal utility of income, the probable value of total satisfactions is maximized by dividing income *evenly*." A. LERNER, *THE ECONOMICS OF CONTROL: PRINCIPLES OF WELFARE ECONOMICS* 29 (1944) (emphasis in original).

14. Reducing "alienation" has been shown to have a positive effect on productivity in U.S. experiments, as well. It is possible, however, that income equality may actu-

of market forces, entails a more direct attempt to increase economic efficiency. Hence, market socialism attempts to rationalize the socialist system to meet the competitive demands of a modern industrial society.<sup>15</sup>

With the introduction of a market and more decentralized decision-making, it is hoped, in theory at least, that the rigidity of a centrally planned economy will be avoided. Nonetheless, the system still resorts to some level of central planning in order to provide the necessary direction and impetus for development and to avoid what are viewed as the most undesirable social consequences of capitalism.<sup>16</sup> But with market-determined prices providing instantaneous information on relative scarcities, the task of allocating resources is bound to be handled more efficiently and with fewer burdens on the central planners.<sup>17</sup>

The actual blend of economic plan and market aspects can vary. Jan Drewnowski has outlined three ideal-types, all of which embody some degree of state and consumer preference fulfillment.<sup>18</sup> In what he calls a "first-degree market economy," the quantities of goods are fixed and the only choice left to the consumer is what to purchase from among the supply presented to him. Both Yugoslavia and Hungary are far beyond this stage. In a "second-degree market economy," consumer preferences influence what goods will be produced within the constraints of central resource allocation. Finally, in the third and highest degree of market socialism, the central planners allocate investment resources according to macro-sectors (*e.g.*, consumption, producer-goods and so forth). Consumer preferences in this model determine the pat-

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ally reduce incentive sufficient to counterbalance the increased productivity which results from reduced alienation. *See generally* W. FAUNCE, PROBLEMS OF AN INDUSTRIAL SOCIETY (1968) for a more in-depth treatment of alienation.

15. Decentralization of economic decision-making, as manifested by market socialism, may also be viewed as the natural result of modernization since the latter has a democratizing effect on economic systems in general. This effect may be attributed to the more differentiated social structure which modernization generates. Smelser, *Mechanisms of Change and Adjustment to Change*, in POLITICAL DEVELOPMENT AND SOCIAL CHANGE 32 (J. Finkle & R. Gable eds. 2d ed. 1971).

16. This is precisely the aim of both the Yugoslav and Hungarian reform programs. In the latter, the NEM "represent[s] an effort to combine the advantages of centralized planning and market incentives." Berend, *The Historical Background of the Recent Economic Reforms in East Europe (The Hungarian Experiences)*, 2 E. EUR. Q. 76 (1968). The same applies in Yugoslavia. *See* Dunn, *Ideology and Organization in Socialist Yugoslavia: Modernization and the Obsolescence of Praxis*, 1972 COMP. COMMUNISM 25.

17. Hayek, *The Price System as a Mechanism for Using Knowledge*, in COMPARATIVE ECONOMIC SYSTEMS, *supra* note 11, at 28-30.

18. Drewnowski, *The Economic Theory of Socialism: A Suggestion for Reconsideration*, in COMPARATIVE ECONOMIC SYSTEMS, *supra* note 11, at 124-25.

tern of new investment among various industries. It is this third type of economy which is commonly known as market socialism.

In the classic formulation of market socialism, consumers through their decisions in the marketplace determine which goods will be produced, as well as the amount of those goods.<sup>19</sup> Hence, prices of consumer goods are set by the interplay of supply and demand, as are the costs (or price) of labor and services.<sup>20</sup> The central planners maintain their control over the direction of the economy by:

- (a) Setting the prices of producer goods by a series of successive approximations at such a point that supply will just satisfy demand;
- (b) Imposing administrative directives on enterprise managers to use that method of production which minimizes cost while producing that quantity which equalizes marginal cost and price;<sup>21</sup>
- (c) Distributing social dividends in such a way as to reduce the disparity in income resulting from a market-determined labor wage, but having no influence on any worker's occupational choice;
- (d) Deciding upon the rate of investment which will yield the desired future growth and directing this investment into priority areas; and
- (e) Utilizing economic controls such as fiscal, monetary and credit

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19. See O. LANGE & F. TAYLOR, *ON THE ECONOMIC THEORY OF SOCIALISM* 57-143 (B. Lippincott ed. 1938).

20. In this model, prices are centrally fixed and output decentralized. An alternative model could presume more decentralized prices. See LERNER, *supra*, note 13, at 62-65; Wiles, *Rationality, the Market, Decentralization, and the Territorial Principle*, in *VALUE AND PLAN: ECONOMIC CALCULATION AND ORGANIZATION IN EASTERN EUROPE* 210 n. 8 (G. Grossman ed. 1960) [hereinafter cited as *VALUE AND PLAN*]. For more information, see Balassa, *Economic Reform in Hungary*, 37 *ECONOMICA* 1 (1970); Lorince, *Hungary's Canny Liberalization*, 69 *NEW STATESMAN* 502 (1970); Nagy, *Hungarian Economic Reform, Past and Future*, 61 *AM. ECON. REV. (Papers and Proceedings)* 430 (1971); and Racz, *Assessing Hungary's Economic Reforms*, 17 *E. EUR.* 2 (1968).

21. A form of "market socialism in reverse" has also been suggested in which the central planners set output targets, raising them to meet excess demand and lowering them when excess supply occurs. Price is therefore set to equal marginal cost at the market determined output. Of course, if the planners desire a certain output yet direct managers to maximize profits, prices must be set so that the demand and supply of both inputs and outputs are at the point where the firm's profits are maximized. If imperfect market conditions exist, a divergence from the point of maximum consumer welfare will therefore result. See Ward, *The Planners' Choice Variables*, in *VALUE AND PLAN*, *supra* note 20, at 138 and 149-50.

policies to stabilize and (when needed) encourage the economy.

#### IV. YUGOSLAV MARKET SOCIALISM

##### A. *Development*

Having established an admittedly simplified version of a theoretical market socialist system (along with theoretical variations on the theme), the market socialist variations in the two economic systems of Yugoslavia and Hungary can now be examined at greater length. Looking first to Yugoslavia, the genesis of its market socialism is found in the introduction of workers' self-management in 1950.<sup>22</sup> By 1952, social programs abolished the distribution plan, decentralized pricing decisions to the enterprise level and eliminated detailed output quotas. Decisions on wage scales were also decentralized somewhat, although the State reserved the right of direct intervention. The dismantling of the supply (distribution) system meant that the central government was no longer intimately involved in every major economic decision. Of course, informal mechanisms such as taxation and credit controls were still available to direct the functioning of the economy. The decentralization movement was nonetheless a significant step, as it enabled more account to be taken of the local economies at different locations within the nation at various points in time. It also helped to eliminate many of the inefficiencies and bottlenecks which arose from the rigid hierarchy of all-embracing central planning.<sup>23</sup>

The impetus for this drastic shift towards decentralization and a socialist market arose from Yugoslavia's 1948 expulsion from the Cominform.<sup>24</sup> A complete revamping of the economic system was necessary for the country to maintain its independence from Soviet hegemony. It is possible, of course, that such a change would have occurred eventually because Yugoslavia's experience with a Soviet-type command economy

[was] nothing short of catastrophic. Many industries [were] shat-

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22. This was not the first experiment with works councils. They were introduced in Russia in 1905 and again between 1917-20, in Hungary in 1918-19, and in Spain in 1936. However, Yugoslavia was the first to institute the system on a long-term nationwide scale.

23. See Brown & Neuberger, *Basic Features of a Centrally Planned Economy*, in *COMPARATIVE ECONOMIC SYSTEMS*, *supra* note 11, at 105-08, for a description of some of the undesired consequences of a centrally planned economy.

24. F. SINGLETON, *TWENTIETH CENTURY YUGOSLAVIA* 169 (1976).

tered, public utilities [were] in a decrepit state, agricultural productivity [had] declined, and the standard of living [had] been lowered. Furthermore, these negative achievements of the Yugoslav Communist economic experiment [were] bought at a tremendous cost.<sup>25</sup>

At any rate, Yugoslavia's experiment continued and, for various political reasons, the Soviets could not interfere directly.<sup>26</sup> Each firm's management board, chosen by its respective workers' council, drew up both the basic and monthly operating plans and made final decisions on appointments and labor standards. After 1953, the local territorial government, in consultation with the workers' council, appointed the Director, in contrast to previous ministry appointments. The Director could hire, fire and transfer workers, carry out administrative rulings, run the day-to-day operations, and legally contract in the name of the firm.

Early in 1954, price controls on production goods were actually abandoned, but this was soon found to be unworkable given the still unstable and imperfect markets.<sup>27</sup> However, two-thirds of the prices for production goods remained controlled until 1962. But again, in the early 1960s, economic liberalization resumed. By 1967, only half of all goods were under price controls and general wage controls had been relinquished. The use of taxes became more prevalent as a substitute for direct allocation of investment resources and the Government's involvement in credit policy was also reduced to informal control over lending banks and the acquisition of foreign exchange.

### B. Reforms

The key to Yugoslavia's entire reform program, however, centers around the concept of workers' self-management. According to Section VIII of the Preamble to the 1963 Federal Constitution, one of the goals of Yugoslavia's multi-target mix<sup>28</sup> is to introduce broad participation in decision making through social self-government and workers' self-management. Under the more recent changes, the workers have gained more control and the Directors have lost some of their broad powers.<sup>29</sup>

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25. A. DRAGNICH, *TITO'S PROMISED LAND: YUGOSLAVIA* 172 (1954).

26. *See generally*, D. RUSINOW, *THE YUGOSLAV EXPERIMENT, 1948-74*, 23-31 (1977).

27. F. SINGLETON, *supra* note 24, at 159-62.

28. Multi-target mix is the result sought through economic policies; *i.e.*, low unemployment and stable prices.

29. F. SINGLETON, *supra* note 24, at 269-70.



Although the Yugoslav approach "is only one among many possible ways of organizing socialist market decisions processes,"<sup>30</sup> the actual system is more "radical" than market socialism in some ways, as will be explained below.

Yugoslavia is a dual-preference economic system closely approximating Lange's ideal model.<sup>31</sup> Consumers affect not only short run but also long run production and investment decisions. In other words, the State's rank of priorities places more emphasis on fulfilling consumer demand patterns. Investment decisions, a significant proportion of which are transferred to the enterprises, will be based upon expected profitability which is, in turn, determined by consumer demand for particular goods.

This reorientation towards workers' self-management developed with the advent of the 1965 Reform Legislation, when the role of the central planners and party hierarchy was again reduced.<sup>32</sup> For example, the shift from the former so-called "New System" (1953-1964) "implied a drastic curtailment of the central government's role in the pooling and disbursing of investments."<sup>33</sup> The result was that the firm retained seventy-one percent of net profits as compared with fifty-one percent during the pre-Reform period.<sup>34</sup> Therefore, potential investment funds at the enterprise level increased, while the State's share was based on the imposition of a profits tax rather than on a transfer of investment funds. Figure I provides a summary of the major changes in emphasis which have taken place in Yugoslavia as its economy has decentralized.<sup>35</sup>

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30. B. WARD, *THE SOCIALIST ECONOMY: A STUDY OF ORGANIZATIONAL ALTERNATIVES* 182 (1967).

31. See O. LANGE & F. TAYLOR, *supra* note 19.

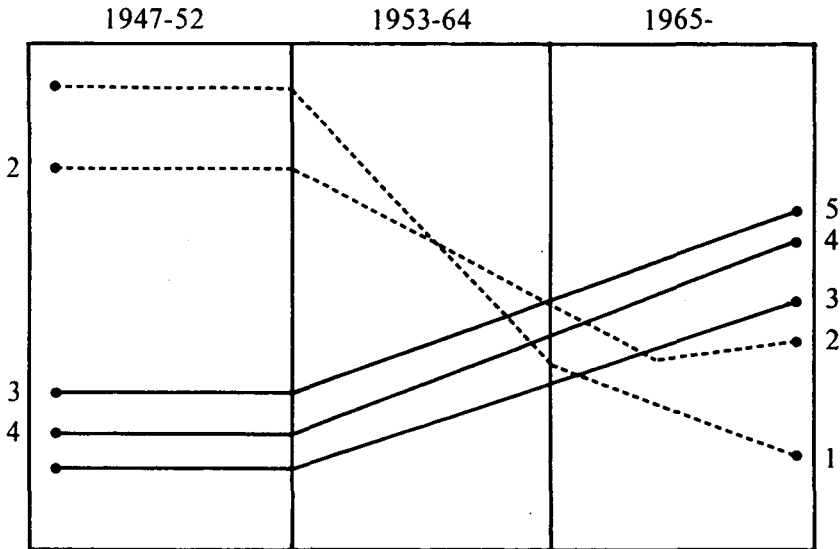
32. See Bicanic, *Economics of Socialism in a Developed Country*, 44 *FOR. AFF.* 633 (1966), for an excellent description of this sweeping reform program.

33. N. SPULBER, *SOCIALIST MANAGEMENT & PLANNING: TOPICS IN COMPARATIVE SOCIALIST ECONOMICS* 15 (1971).

34. See M. GAMARNIKOW, *ECONOMIC REFORMS IN EASTERN EUROPE* 73 (1968).

35. From D. GORUPIC & I. PAJ, *WORKERS' SELF-MANAGEMENT IN YUGOSLAV UNDERTAKINGS* 28 (1970).

FIGURE I



- 1—The directive and organizational role of the State  
 2—The plan  
 3—The market  
 4—Undertaking autonomy  
 5—Self-organization of the economy

Despite the decentralization trend, fiscal and monetary controls, as prescribed by the market socialist model, are still used to promote economic growth in critical and unstable sectors. More recent events<sup>36</sup> seem to indicate a tightening of these economic controls, especially taxation,<sup>37</sup> in order to stabilize Yugoslavia's ailing economy and to forestall worker resentment due to the "conspicuous consumption" of some overly consumer-oriented citizens.<sup>38</sup> But the increased importance of consumer sovereignty will no doubt remain intact due to its crucial impact on the success of the system. The Reform's

36. See P. JONAS, *TAXATION OF MULTINATIONALS IN COMMUNIST COUNTRIES* 29-40 (1978); Jelcic, *Taxation of Foreign Persons in Yugoslavia*, 24 EUR. TAX. 39 (1984).

37. For example, responsibility for collection of taxes was shifted to the municipalities, affording better control and easier administration. P. JONAS and Jelcic, *supra* note 36.

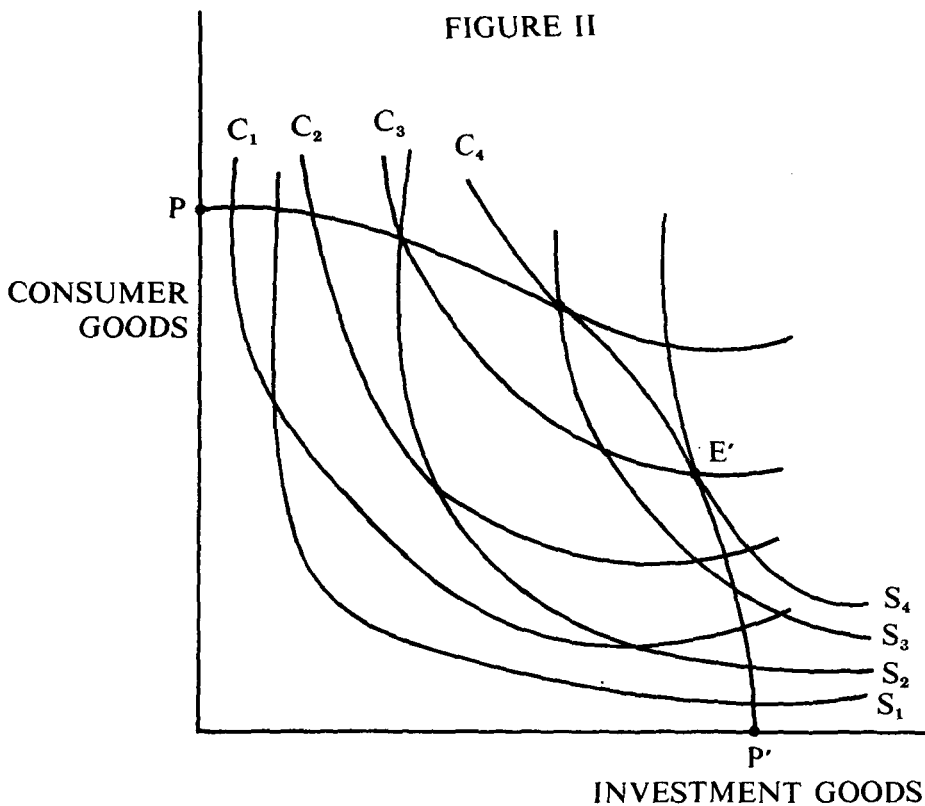
38. See Anderson, *Belgrade Shuns New "Stalinism,"* N. Y. Times, Nov. 19, 1972, at 5, col. 1.

objective was not only to raise living standards but also to give workers more incentive to raise productivity and to lower production costs. An abundance of consumer goods was essential to provide the incentive to work harder and earn more money.<sup>39</sup>

Ivan Maksimovic sums up Yugoslavia's reliance on a dual-preference system:

[T]he characteristic feature of the present self-management economic model is not the absence of the state as a factor of guidance and influence on economic trends but the tendency towards an equilibrium of influence of the state authorities and the economy, as well as towards the use of economic instead of administrative methods of state influence over the economy.<sup>40</sup>

Diagrammatically, this is represented in Figure II.



39. Anderson, *Diners' Club or Just Dinars, Yugoslav Consumer is King*, N. Y. Times, Aug. 16, 1972, at 15, col. 1.

40. Maksimovic, *The Economic System and Workers' Self-Management in Yugoslavia*, in YUGOSLAV WORKERS' SELFMANAGEMENT 135 (M. Broekmeyer ed. 1970).

Point E is where the State's indifference curve ( $S_3$ ) intersects the consumers' aggregate indifference curve ( $C_4$ ) at the highest preference for the consumers within the constraint of the economy's production possibility frontier (PP'). Given the heavier weight on consumer preference, E will be to the northwest along this frontier.<sup>41</sup> If State preferences were supreme, the point of equilibrium would move down the curve to the southeast and consumer satisfaction would fall to  $C_3$  as State satisfaction rises to  $S_4$  (point E').

The final result is a system similar to Lange's in its reliance on market mechanisms to determine prices.<sup>42</sup> It does so to an even greater extent than Lange envisioned, however, and this generates problems in and of itself. For instance, Wiles characterizes the Yugoslav approach as a system of "mixed rationality" in that the law of determining value through market prices does not operate perfectly in the real world.<sup>43</sup> As Ward points out, only "[i]f markets were perfectly competitive [would] the new Yugoslav system *with profits maximization* . . . lead to the same allocative result as market socialism,"<sup>44</sup> for then the "rule" of setting price equal to marginal cost ( $P_x = MC$ ) would be fulfilled. The planners are limited to economic controls, however, and they undoubtedly face problems similar to those of their Western counterparts in achieving more perfect competition.

### C. *Deviations from Market Socialism*

There are a number of important distinctions between market socialist theory and Yugoslav practice. While Lange assumes free consumer and occupational choice, his model does not relinquish the socialist invective against private property. In Yugoslavia, on the other hand, firms with fewer than five employees may be privately owned as may be farms of a certain limited acreage. Additionally, Yugoslavia emphasizes social ownership, rather than public (or State) ownership.<sup>45</sup> Direct State administration has ended with the depoliticization of eco-

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41. This, of course, assumes full utilization of resources as well as the theoretical ability to aggregate communal preferences. Without full resource utilization, point E would lie to the left and within the P-P' curve. Note that the State indifference curves ( $S_1$ ,  $S_2$ ,  $S_3$ , and  $S_4$ ) indicate an inherent preference for investment goods, naturally arising out of a State's defense and international prestige concerns.

42. A "social dividend" is also distributed in the form of communal goods, framework and allocative activities and welfare programs, all in accordance with the market socialist model.

43. See Wiles, in *VALUE AND PLAN*, *supra* note 20, at 187.

44. Ward, in *VALUE AND PLAN*, *supra* note 21, at 151 (emphasis in original).

45. See Kamusic, *Economic Efficiency and Workers' Self-Management*, in *YUGOSLAV WORKERS' SELF-MANAGEMENT*, *supra* note 40, at 79.

conomic decision-making.<sup>46</sup> Thus, ownership in Yugoslavia can no longer be thought of in terms of the State. Society is the theoretical owner of productive resources and it places its proxy for control into the hands of *both* the State and the individual firms.

The most significant difference between the Yugoslav system and market socialism is the workers' self-management system which, of course, does not square with Lange's assumption that the managers work for the State.<sup>47</sup> Thus, under Lange's theory, it is possible for the State to enforce the "rules" of cost minimization and marginal cost pricing. In Yugoslavia, on the other hand, the Directors and managers theoretically are directly responsible to the workers through each enterprise's works council. Nevertheless, the management may not be as responsible to worker's interests as they purportedly are in theory.<sup>48</sup> At the same time, however, management has become more independent of State control. The interests of workers are more clearly accounted for by their representatives through the recent partitioning of enterprises into working sub-units ("Basic Organizations of Associated Labor").<sup>49</sup>

Except for workers' self-management, Yugoslavia's divergence from market socialism is not all that significant and may be seen as the sum of particular reactions to the country's unique problems.<sup>50</sup> Before examining the effects of workers' self-management on the operation of the firm under market socialism by a comparison of the actual operation of a Yugoslav enterprise with that of an Hungarian enterprise, we must now turn to an examination of Hungary's market socialist system which will serve as the "control" for this comparison.

46. Bicanic characterized the 1965 Reform by the terms "Decentralization, Depoliticization, and Democratization." See Bicanic, *supra* note 32.

47. See O. LANGE & F. TAYLOR, *supra* note 19.

48. Benjamin Ward, especially, concluded that, in the early stages of development, "the workers as a whole [did] not really play a very great role, even indirectly, in the management of the firm." He did see signs of their growing influence, however, and more recent state intervention has increased the effectiveness of workers' councils. The latter also became more assertive as they grew more accustomed to their role. See Ward, *Workers' Management in Yugoslavia*, 48 J. POL. ECON. 377 (1957). Gorupic and Paj reported that, as of 1969, approximately 30 percent of all workers took part in various bodies of enterprise management. Production workers composed 70.5 percent of workers' councils, 55.3 percent of management boards and 55.5 percent of the chairmen of workers' councils. See D. GORUPIC & I. PAJ, *supra* note 35, at 70.

49. See Orbe III, *The Multinational in Yugoslavia*, 19 INT'L LAW. 623, 625, 626 (1985).

50. As mentioned previously, the differences in reliance on the market are differences of degree only and not major alterations from market socialist theory. The toleration of small privately owned businesses and farms, for example, was due to the failure of forced collectivization.

## V. HUNGARIAN MARKET SOCIALISM

A. *History*

On January 1, 1968, the New Economic Mechanism ("NEM") was formally instituted in Hungary.<sup>51</sup> It marked a definite break with rigid central planning and the beginning of market socialism in that country. In one sense, Hungary was trying to find a "happy medium" between the economic systems of the U.S.S.R. and Yugoslavia. Because the inclusion of any form of workers' self-management was considered taboo, Hungary has come even closer to the pure model of market socialism than has Yugoslavia.

The NEM experiment did not require an actual political break with the Soviet Union to manifest itself. The inefficiency and wastefulness of the Soviet-type command system was impetus enough.<sup>52</sup> In a small country such as Hungary, the effects of improper resource allocation and unbalanced development showed up much more quickly and made a more obvious impression than in a large and resource-rich country such as the Soviet Union. At first, piecemeal reforms were attempted in 1956-57.<sup>53</sup> Each reform addressed a different problem; but without any integrated plan, some of the reforms, such as bonuses, incentives and centralization of monetary and fiscal affairs, were counter-productive to each other. Enterprises actually had to oppose certain reforms for fear that the new and inadequate controls would result in problems for the delivery of inputs. For example, since the reforms were only partial, deliveries were neither compulsory nor was a working market system in place to weed-out by competitive forces those suppliers who did not deliver. Hence, the "fundamental drawbacks [of the Soviet system] were not changed."<sup>54</sup> George Feiwel's conclusion (concerning Czechoslovakia during the same time period) that "halfway, inconsistent measures have more adverse effects than retaining the traditional planning system,"<sup>55</sup> applies equally well to the results of the 1956-57 reforms in Hungary.

It was finally recognized that a well-prepared, comprehensive reform program was necessary. The Central Committee of the Hun-

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51. P. TOMA & I. VALGYER, *POLITICS IN HUNGARY* 32-33 (1977).

52. J. RADVANYI, *HUNGARY AND THE SUPERPOWERS: THE 1956 REVOLUTION AND REALPOLITIK* 154-55 (1971).

53. Berend, *supra* note 16, at 87. For a description of the actual measures taken in early 1957, see Portes, *The Strategy and Tactics of Economic Decentralization*, 1972 *SOVIET STUD.* 637-39.

54. Berend, *supra* note 16, at 87.

55. G. FEIWEL, *NEW ECONOMIC PATTERNS IN CZECHOSLOVAKIA: IMPACT OF GROWTH, PLANNING AND THE MARKET* 128 (1968).

garian Socialist Workers' Party (*i.e.*, the Communist Party) set up working groups to investigate the available alternatives and approaches. By 1967, a program was developed, approved and slated for commencement in 1968.<sup>56</sup> As Joseph Szabados noted, "It [was] probably the most carefully prepared and thoroughgoing economic reform in Eastern Europe, with the exception of Yugoslavia's."<sup>57</sup>

### B. Reforms

In many ways, Hungarian planners learned a lesson from the Yugoslav experience and planned their reforms even more carefully. For example, the strategy was to ease the NEM into operation with various administrative controls as safeguards, and then to gradually release the controls.<sup>58</sup> The Reform itself was not instituted to develop an absolutely free-market economy. Its aim was to create a more rational economic system through more decentralized decision-making and a closer working relationship between central planning and market-determined prices.<sup>59</sup> Thus, the Central Committee resolved in May, 1966, that "[p]rices . . . were to correspond to supply and demand within the framework of state priorities . . . [and] world market prices were eventually to prevail."<sup>60</sup>

To achieve the long-range goal of a more efficient socialist system which could effectively meet both State and consumer preferences, the reforms were organized around three medium-range goals: to speed up *balanced* economic growth; to improve technological development; and to stimulate foreign trade.<sup>61</sup> The actual means being used to achieve these goals comprise the Reform itself, and are summarized as follows.

First, the central plan specifies policy directives for major targets and investment priorities which are, as in Yugoslavia, mostly indicative in nature.<sup>62</sup> The remaining administrative controls serve more as con-

56. W. SHAWCROSS, *JANAS KADAR AND THE POLITICS OF HUNGARY SINCE REVOLUTION* 112 (1974).

57. Szabados, *Hungary's NEM: Promises and Pitfalls* 17 E. EUR. 25 (1968). It is important to note, however, that the NEM is by no means simply "a modification of the existing system, . . . [it is] a wholesale reform of the entire economy."

58. *See id.*

59. *See* Gati, *Hungary: The Politics of Reform*, 60 CURRENT HIST. 293 (1971).

60. Szabados, *Hungary's NEM: Reorganization or Basic Reform?*, 17 E. EUR. 13 (1968).

61. In this respect, the actual preference mix in Hungary, if it were to be indicated on Figure II, would be further to the southeast along the P-P' frontier than it is in Yugoslavia.

62. For a good description of one type of indicative planning, see Kindleberger, *French Planning*, in *COMPARATIVE ECONOMIC SYSTEMS*, *supra* note 11, at 204-20. Nicholas Spulber has compared Hungary with Yugoslavia under the "New System"

straints than as outright commands and are used to reconcile national interests with decisions made in the markets. As the Party's then-chief economic expert, Rezso Nyers, emphasized, the central planning bureau only sets long-term goals while leaving the firm to work out the details under market conditions.<sup>63</sup> Hence, decision-making is considerably decentralized and significant autonomy has reverted to the enterprise level. Besides the freedom of what to buy and sell (which, it is hoped, will increase competition), managers also have more freedom to determine labor and wage policies within the framework of the new labor law.<sup>64</sup> These developments are all the result of the Central Committee plenum resolution of May 27, 1966, providing for:

- a) new principles of planning and management that will give a greater independence to directors of enterprises;
- b) a new system of wages and prices in which the essentials of centralized control are to be combined with a degree of flexibility granted to individual enterprises;
- c) greater attention is to be paid to the needs of the market and effective demand is to be reflected in the production plans; and
- d) all the existing bureaucratic superstructure between the level of the ministries and that of the individual enterprise is to be abolished.<sup>65</sup>

Second, prices are to reflect more accurately real expenditures for material, labor and capital. To achieve this, goods are divided into three classes. The prices of raw materials and some consumer goods are to remain officially fixed. Most other consumer prices are to be permitted to float between centrally-planned floors and ceilings. Also, certain goods, such as luxury items, are entirely free to fluctuate according to supply and demand. Those prices not originally freed were to be gradually loosened. Thus, 23% of domestic trade took place under free price conditions by June, 1958 (20% were freed and the remainder were controlled to some extent), compared to 15% before the NEM.<sup>66</sup> By 1969,

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(1954-64) in that central plans are not binding. Since 1968, firms may fix individual targets given market conditions and the constraint of federal wage, price, credit, and taxation policies. See N. SPULBER, *supra* note 33, at 15.

63. From speech reprinted in *Nepszabadsag* (Budapest), July 26, 1966. See M. GAMARNIKOW, *supra* note 34, at 57.

64. See Solyom-Fekete, *Hungary's New Labor Code*, 17 E. EUR. 17-20 (1968), for a description of the October 1967 regulations. In brief, they granted management the right to determine the number of workers to be hired and negotiate with the unions on wage scales and profit shares. The State still retained the right to intervene in problem areas, and there was a limit on wage increases.

65. M. GAMARNIKOW, *supra* note 34, at 56.

66. See *Current Developments, Hungary* 16 E. EUR. 41 (1967); Szabados, *supra*



33% of all *consumer* prices had been freed,<sup>67</sup> and it was recognized that price controls on consumer goods were only "a temporary means for dealing with particular disequilibria."<sup>68</sup> With regard to these policies, then, Hungary is still closely adhering to the market socialist model.

Third, the proportion of centrally determined investments are to be decreased under the NEM as State controls are switched from administrative to economic means, such as price, wage and credit policies. Here, again, Hungary resembles not only Yugoslavia, but Lange's scheme as well, which calls for "the central authorities achieving the results they desire by 'economic means'" as the socialist economy "develops and matures."<sup>69</sup> The actual reforms called for bank credits to be awarded on the basis of efficiency and profitability, with interest charged accordingly.

Fourth, the firm itself is to have more control over its net income. Three funds were therefore established in each enterprise: (a) a profit-sharing or participation fund; (b) a development fund for investment, social contributions and local taxes determined by a fixed proportion of the income residual left after profit-sharing; and (c) a reserve fund equal to a percentage of (a) and (b). Economic controls on profit-sharing are imposed through taxation to insure adequate investment. To discourage high wages at the expense of investment, "absolute average wage control" adds the excess of the firm's average wage bill (over the firm's average wage for some base year) to its taxable profits.<sup>70</sup> The participation fund is then taxed according to its size in relation to the total wage bill. The development fund is taxed according to variable rates, depending upon the type of business.<sup>71</sup> The total effect of taxation, however, is to encourage the efficient use of material resources by making the firm's retention ratio a function of its capital-labor ratio while controlling inflation and unemployment.

noté 60, at 14.

67. "Hungary: Where Reform Goes Quietly On," *Economist*, Nov. 15, 1969, at 41. In contrast, it should be noted that twelve years after the Yugoslav reforms began, two-thirds of all industrial goods were traded under controlled prices in Yugoslavia. See Ward, *Political Power and Economic Change in Yugoslavia*, 58 AM. ECON. REV. (Papers and Proceedings) 571 (1968).

68. Portes, *Economic Reforms in Hungary*, 60 AM. ECON. REV. (Papers and Proceedings) 308 (1970).

69. Bornstein, in *COMPARATIVE ECONOMIC SYSTEMS*, *supra* note 11, at 169.

70. See Portes, *supra* note 68, at 307-13.

71. Some private enterprise is tolerated in Hungary just as in Yugoslavia, but it is even less important than in the latter. Again, it was found that particular conditions necessitated some tolerance of such institutions, especially the need to attract artisans to backward areas. See Gamarnikow, *The New Role of Private Enterprise*, 16 E. EUR. 6 (1967).

Fifth, tight control over foreign exchange is continued, and hence trade continues to be burdened with political necessity. However, the *forint* was devalued by setting up new multiple exchange rates, thereby increasing exports so that Hungary's balance of trade would improve. Further, more flexible and efficient trade regulations were instituted to allow the firms to trade from a more competitive position on world markets.

One distinct divergence from market socialism revolves around the policy of income distribution.<sup>72</sup> In contrast to the limited inequality presumed by the market socialist model, there have been public warnings against any tendency towards egalitarianism in wages. At the November 29, 1969 plenum of the Central Committee, for example, Rezso Nyers reiterated the NEM principle of "differentiation according to work performed."<sup>73</sup>

As in Yugoslavia, such a divergence was in response to a particular problem, which in Hungary's case was the lagging productivity of labor. Other than this major inconsistency, the interaction of the market and the central planning authorities in Hungary has been quite close to that envisioned in the market socialist model. Hence, we can use Hungary as our control model and compare the workings of a firm under the NEM with that of a Yugoslav firm, which also works in a market socialist environment, but with the addition of the workers' self-management concept.

## VI. LABOR MANAGEMENT AND THE BEHAVIOR OF THE FIRM UNDER MARKET SOCIALISM

### A. *The Operating Principle*

It is generally recognized that a firm operates in a capitalist economic system with the primary goal (in theory) of maximizing profits. The operating principle of any firm, including a joint venture, is central to an understanding of how it is run, since all major decisions will keep profit maximization in mind. It is the decision-maker in the firm who formulates the principle for any particular economic system. It is the entrepreneur who determines "the main avenues of economic growth,"<sup>74</sup> and bears the concomitant risks and uncertainty in return

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72. Hungary is also more "radical" than the pure Lange model, as its output targets are no longer centrally determined by rigid directions. Thus, it really appears more like the Lerner model in which profitability is the guiding force. Nonetheless, the system works with a measure of central control more closely approximating Lange's mix than does the economy presently operative in Yugoslavia.

73. Current Developments, *Hungary* 19 E. EUR. 39 (1970).

74. N. SPULBER, *supra* note 33, at xvi.

for the resulting profits.<sup>75</sup> A look at where the entrepreneurial function lies in our two models will help determine their respective operating principles.

Under the labor-managed system of present-day Yugoslavia,

[t]he worker performs the function of a collective businessman since he carries out selfmanagement together with other workers, . . . [S]elfmanagement in fact unites in one single function what, under conditions of privately organized production, is performed by two special socio-economic subjects — the owner of the capital and the owner of the labour force.<sup>76</sup>

Herbert Grubel asserts that public ownership of the means of production should result in the Government performing the role of the entrepreneurial decision-maker and bearing the necessary risks.<sup>77</sup> He would probably only go so far as to assign the worker-managers the operational (or "operative-managerial") function — "the task of combining inputs and of producing outputs in some accordance with demand intensities and supply scarcities."<sup>78</sup>

Yet, the decentralization of decision-making and the institution of profit-sharing has, whether for good or for ill, increased the risks involved for the workers.<sup>79</sup> A worker's net income depends on his (or his representative's) decisions. Hence, the entrepreneurial function has been considerably diffused through society. Although the Government's obligations and functions in the economy may have been curtailed, the State remains the owner of social capital and hence no one undertaking

75. The entrepreneur may be viewed as the innovator creating profits. As risks fall on the owner of capital, which may or may not be the same person as the entrepreneur, a duality may result which is significant for the operations of a joint venture in a market socialist system. See B. HORVAT, *TOWARDS A THEORY OF PLANNED ECONOMY* 114-15 (1964).

76. Maksimovic, in *YUGOSLAV WORKERS' SELFMANAGEMENT*, *supra* note 40, at 136.

77. Grubel, *Comments (on The Nationalized Firm in Yugoslavia, by Benjamin Ward)*, 55 *AM. ECON. REV.* 78 (1965). He believes that the ideological basis of workers' self-management creates a conflict between state interests and the goals of the workers. See also Dunn, *supra* note 16.

78. N. SPULBER, *supra* note 33, at xvi.

79. As one commentator has noted, in contrast to a "capitalist co-operative," entrepreneurial control is in the hands of those supplying the labor input in a "producer co-operative." Since net revenue may be negative, the suppliers of the input performing the entrepreneurial function will share the risks. See Dubravcic, *Labour as Entrepreneurial Input: An Essay in the Theory of the Producer Co-operative Economy*, 37 *ECONOMICA* 297 (1970).

can extract the full profits for itself.<sup>80</sup> Whether or not one views the State (or society) as a partner in entrepreneurship (as the owner of capital), the Yugoslav firm does not reap the full rewards of production. It pays a price — interest or a fixed rent — on the socially-owned capital used and it must also make contributions for the development of the community.<sup>81</sup>

With labor providing the entrepreneurial input in a labor-managed economy (using Dubravcic's producer co-operative scheme), the worker will wish to maximize the efficiency of his input in terms of the firm's net revenue. Hence, if net income,  $D$ , is equal to the value of total product or output ("VTP") less the costs of operating the firm in a labor-managed co-op ( $TC_1$ ) (i.e.,  $D = VTP - TC_1$ ), entrepreneurial efficiency ( $E$ ) in a one-output-two-input case will be:<sup>82</sup>

$$E = \frac{D}{L} = \frac{P_x X - iK}{L}$$

$D$  = net income  
 $L$  = labor force  
 $P_x$  = price of product  $x$   
 $i$  = interest rate  
 $K$  = capital employed

Dubravcic asserts that "net labor productivity" ( $E$ ) is the "maximand" for the labor-managed firm because there is no wage rate set by the firm. The workers obtain their reward as the suppliers of labor by dividing the firm's residual income after non-labor costs, which is why wages are not subtracted from the above formula.<sup>83</sup>

To obtain the maximum individual income, the supplier of the entrepreneurial input, in this case labor, will want to maximize net revenue per labor unit. In other words, the operating principle of the labor-managed firm is the maximization of the average income per worker.

80. See Ward, *Marxism-Horvatism: A Yugoslav Theory of Socialism: A Review Article*, 57 AM. ECON. REV. 512 (1967). See also D. GORUPIC & I. PAJ, *supra* note 35, at 46-47.

81. Note also that the community still bears a part of the risk because it supports a minimum wage for unsuccessful firms. See B. HORVAT, *supra* note 75, at 120. See also Domar, *The Soviet Collective Form as a Producer Cooperative*, 56 AM. ECON. REV. 734, 737 (1966). Finally, one can subtract the cost of other inputs to produce an even more complicated model. See J. VANEK, *THE GENERAL THEORY OF LABOR-MANAGED MARKET ECONOMICS* 23-24 (1970).

82. The formula for a co-op in general is entrepreneurial efficiency ( $E$ ) equals net revenue ( $D$ ) divided by the amount of entrepreneurial input ( $L$ ). In the above formula,  $L$  is the labor force,  $P_x$  is the price of the product  $x$  and  $i$  is the interest charged on capital ( $K$ ). See Dubravcic, *supra* note 79, at 300. More than one output ( $P_i X_i$ ) can also be accommodated for in this formula.

83. Ordinarily,  $TC_1$  should equal  $iK + wL$ , thereby implying that wages are a cost to be subtracted in deriving productivity. This is not the case in a theoretical model in which labor is the entrepreneurial factor dividing profits instead of wages.

This is only natural, say Gorupic and Paj, for "the material interest of individuals and social needs are *the main motive powers underlying economic activity*."<sup>84</sup> Ward calls it "that dependable human motivation: self-interest,"<sup>85</sup> while Domar softens the implications by noting that "co-op members are likely to be ordinary human beings bent on maximizing the benefits from their participation in the co-op."<sup>86</sup>

Vanek adds, however, that just as in the capitalist system, there is no one all-encompassing motive. A broader conception of the motivation principle could include maximizing growth, surplus value or even employment<sup>87</sup> since the absorption of community unemployment may be seen as a "positive good."<sup>88</sup> Income maximization is also subject to the constraints of desired leisure time and improvement of working conditions. But, on the whole, Vanek concludes that

[t]he principle of maximization of income per man is operative in Yugoslavia in the longer-range policies of the labor-managed firms, and especially if we think of the broader interpretation where income is not only monetary income.<sup>89</sup>

Perhaps the most important point to bear in mind is that other motives should not be in conflict with this maximand. For example, attempting to maximize aggregate net income (*i.e.*, profits) *could* be in conflict with our central operating principle if it involved business operations beyond the point where the marginal cost of labor equals its marginal revenue ( $MC_L = MR_L$ ). As shown in Figure III, this *might* actually involve production corresponding to a point (E) at which the marginal cost of employing additional workers to maximize profits is higher than the average dividend rate currently earned. This depends on the labor structure which determines the position of the marginal labor cost curve ( $MC_L$ ). Hence, average income for all workers involved would fall (assuming that income net of non-labor costs and rent is divided equally among all members of the producer co-op and wages are non-existent). Instead, production will take place at point (F) where income per worker is maximized within the constraints of the labor supply.

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84. D. GORUPIC & I. PAJ, *supra* note 35, at 23 (emphasis in original).

85. B. WARD, *supra* note 30, at 65.

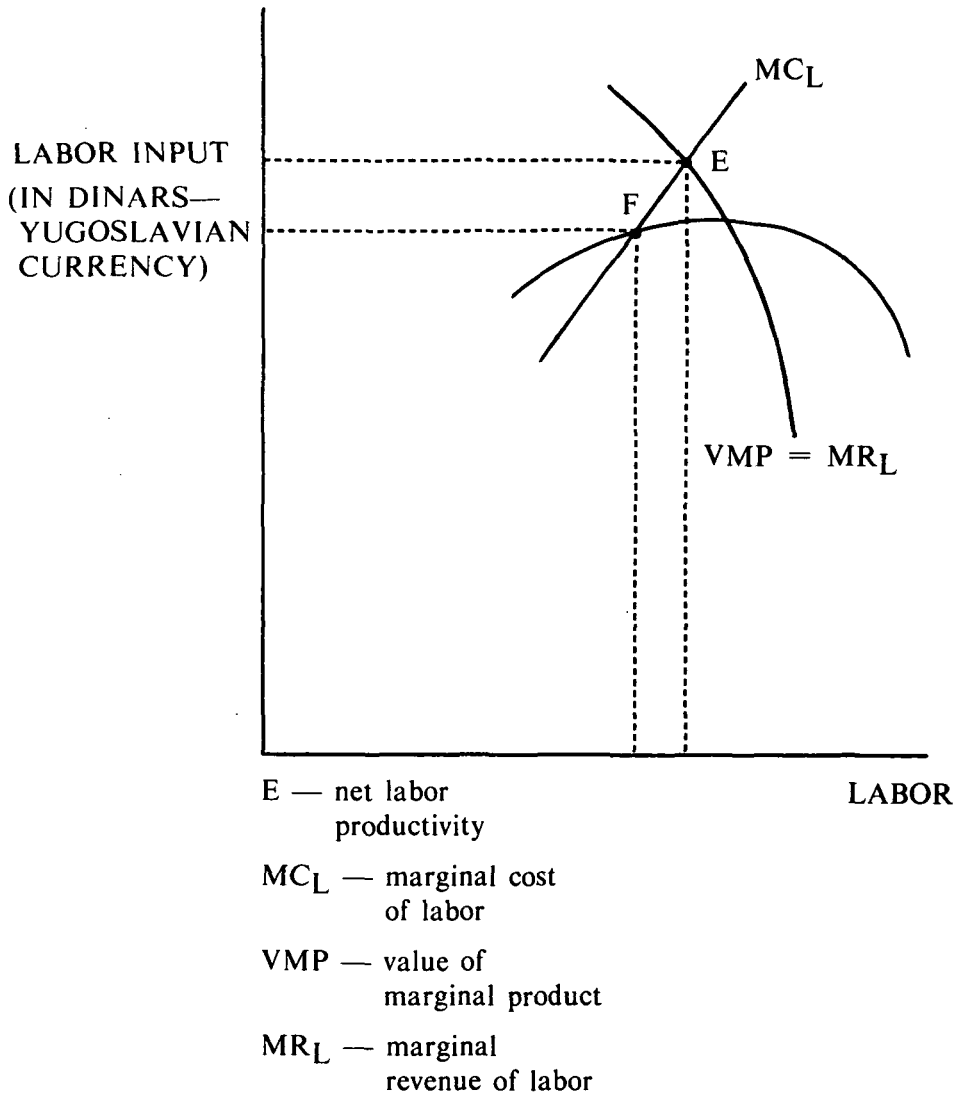
86. Domar, *supra* note 81, at 734.

87. J. VANEK, *THE PARTICIPATORY ECONOMY: AN EVOLUTIONARY HYPOTHESIS AND A STRATEGY FOR DEVELOPMENT* 12-14 (1971).

88. Vanek, *Decentralization under Workers' Management: A Theoretical Appraisal*, 59 AM. ECON. REV. 1013 (1969).

89. J. VANEK, *supra* note 87, at 43. In this author's view, incentives based on expectation of promotion are inferior in quality because they are so dependent on the more uncertain and subjective judgments of one's superiors.

FIGURE III



Hungary presents an entirely different picture in that its dual preference mix places greater weight on State preferences. Through both administrative and economic controls, the State can impose its own standards on the firm which results in the State having more power and the workers less. Through their performance, workers can earn extra income in the form of profit shares, but they do not have enough control over the operation of the firm to arrange production in such a way as to *maximize* their net income (wages plus profit shares).

The managers, on the other hand, do have such power. Commen-

surate with their increased responsibility under the NEM, the managers stand to gain or lose much more than the workers by their decisions.<sup>90</sup> They bear greater risks than the workers and, combined with their decision-making powers, they are entitled to their larger profit-shares by right of their greater entrepreneurial input.<sup>91</sup> In effect, the entrepreneurial function in Hungary is shared between two principal sets of actors, the managers and the State.

The State exercises its entrepreneurial responsibilities through a set of administrative and economic controls which will be explained below. The managers, however, maximize their income by maximizing the firm's profits within the constraints of the market and the State controls. This should be obvious since much of their income is from the profit-sharing fund. There are naturally other incentives such as promotion, but they tend to be subordinate to income maximization. Hence, the Hungarian firm is comparable to a profit-maximizing firm in which the goal is profit,  $o$ , and in which:<sup>92</sup>

$$o = P_x X - iK - wL$$

Given these two operating principles, some of the implications for the Yugoslav joint venture and its Hungarian counterpart may now be investigated.

### B. *Employment and Production*

In the one output-one variable input model used by Ward,<sup>93</sup> workers' self-management evokes a strange response to a change in input and output prices — a downward sloping supply curve (*i.e.*, negative elasticity). Obviously, if replicated in practice, a very unstable condition would arise with any divergence from equilibrium. For example, as shown in Figure IV, should the supply curve S-S' be even more negatively elastic than demand (D-D'), any change from equilibrium at point E would either (a) continue to drive prices up as demand outpaced supply; or (b) drive them down unhindered as supply outpaced demand. Actual results, of course, depend upon assumptions concerning

90. See Szabados, *supra* note 57, at 30. There is usually "a clear link between income differentiation on one side and entrepreneurial functions and risk bearing on the other." M. GAMARNIKOW, *supra* note 34, at 181.

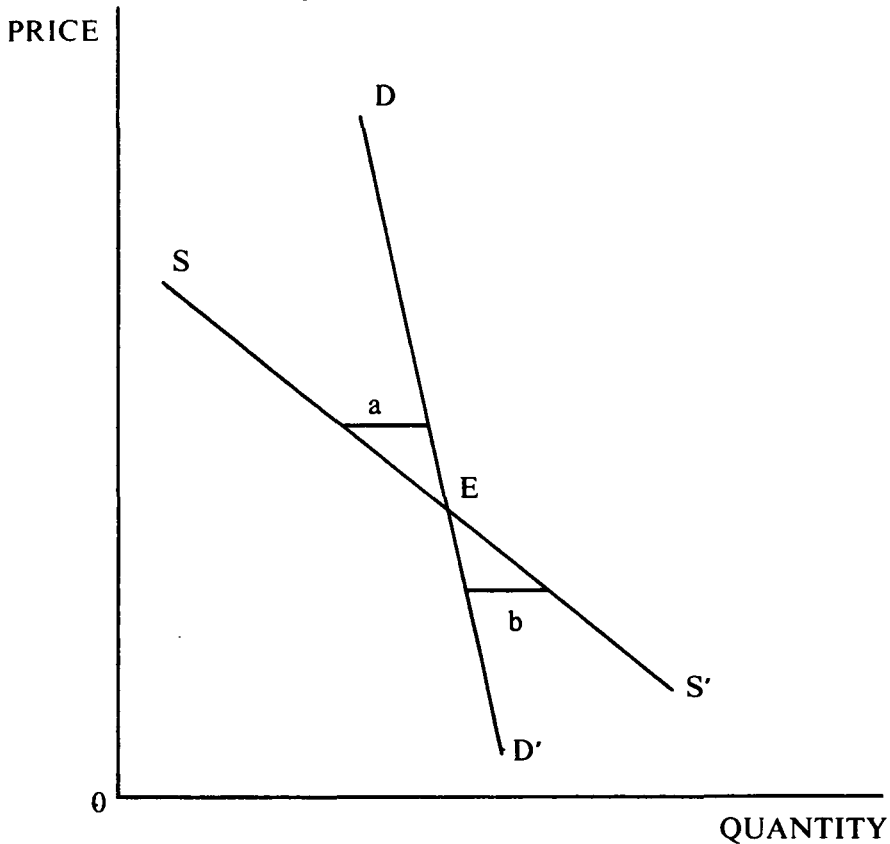
91. "The entrepreneurial duties and rewards of any member of the co-operative will be proportional to the amount of entrepreneurial input he supplies." Dubravcic, *supra* note 79, at 298.

92. Where  $P_x$  is the price of product X, X is the output of the same,  $iK$  is the interest ratio multiplied by the amount of capital employed, and  $wL$  is the wage rate multiplied by the amount of labor employed.

93. See Ward, *The Firm in Illyria: Market Syndicalism*, 43 AM. ECON. REV. 566 (1953).

the pricing process, since in some cases a stable equilibrium could prevail.

FIGURE IV



This negatively sloped supply curve results from the fact that in this simple model<sup>94</sup> an increase in the output price raises the dividend

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94. Which assumes: (1) all non-labor inputs are bought and all outputs sold by the co-op at parametric prices; (2) the production function of the co-op would yield a stable equilibrium under perfect competition; (3) the co-op pays an annual fixed rent,  $R = 0$ ; (4) instead of wages, income net of non-labor costs and rent are divided equally among members as a dividend; (5) the object is maximization of average income per worker; and (6) the co-op can actually employ the optimum number of workers needed to maximize its dividends. See Domar, *supra* note 81, at 736-37.



rate more than the marginal product of labor ( $VMP_L$ ).<sup>95</sup> Domar shows this mathematically as follows:<sup>96</sup> if net labor productivity,

$$a = \frac{P_x^x - iK}{L}, \text{ then}$$

a = net labor productivity  
 $P_x$  = price of product x  
 i = interest rate  
 K = capital employed

$$\frac{\Delta a}{\Delta a} \bigg/ \frac{P_x}{P_x} = \frac{P_x^x}{P_x^x - iK} > 1 \text{ when } iK > 0$$

Since it has been assumed that  $iK$ , the fixed "rent" for funds, is greater than zero,<sup>97</sup> the relative change in average income per worker is greater than the relative change in the output price. Figure V illustrates this graphically.<sup>98</sup>

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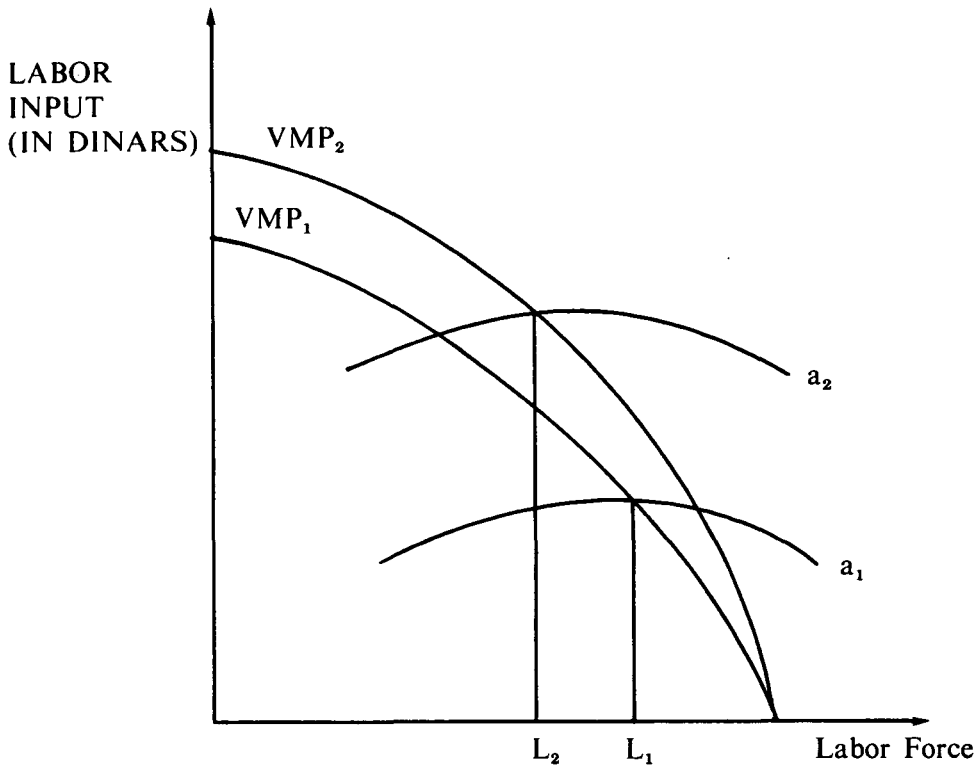
95. In Vanek's more comprehensive model, the average value of product added of labor — equal to  $X(P_x - P_N n)/L$ , where  $N$  is an input other than capital fixed in proportion to output by the coefficient  $n$  — rises more than the marginal value product added of labor equal to  $MPP_L(P_x - P_N n)$ . See J. VANEK, *supra* note 81, at 23-24.

96. See the Appendix to Domar, *supra* note 81, at 753-56.

97. See note 94 *supra*.

98. Adapted from Domar, *supra* note 81, at 740, Appendix Figure 2.

FIGURE V



$a$  — net labor productivity  
 VMP — value of marginal product

By changing the labels by substituting average product curves for net labor productivities ( $a_1$  and  $a_2$ ), marginal product of labor ( $MP_1$  and  $MP_2$ ) for value of marginal product of labor ( $VMP_1$  and  $VMP_2$ ), and labeling the y-axis "output", one can observe that the decreased employment is accompanied by a decrease in production.

Despite such mathematical gymnastics, workers' self-management does not yield such results in reality for two major reasons. First, more than one product is usually produced. This results in a positively sloped supply curve.<sup>99</sup>

99. From J. VANEK, *supra* note 81, at 54, Figure 3.5.I.

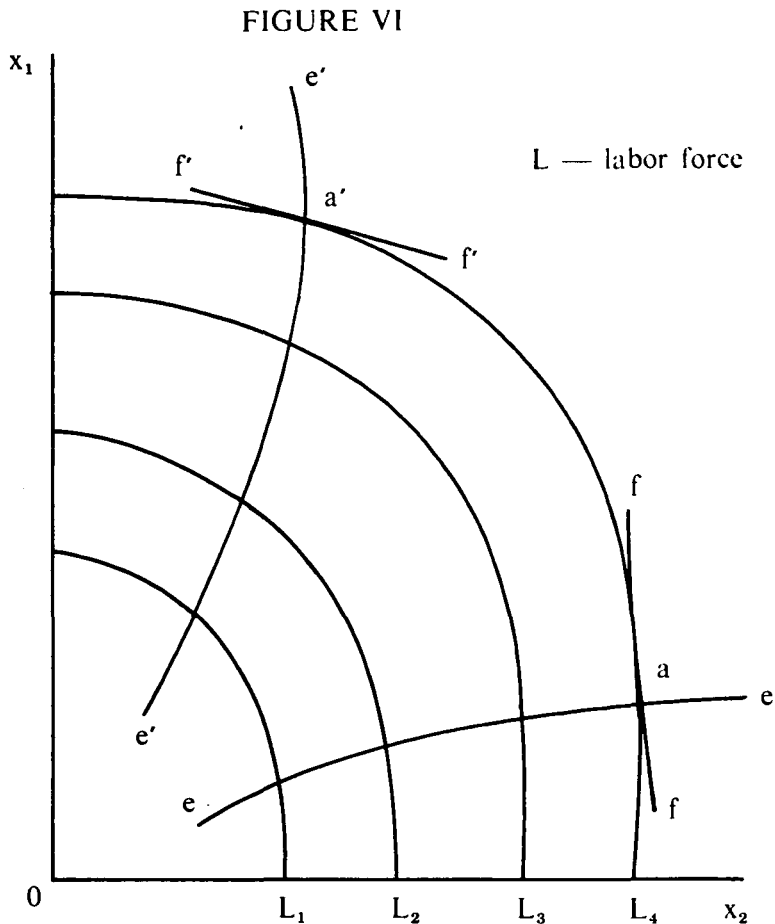
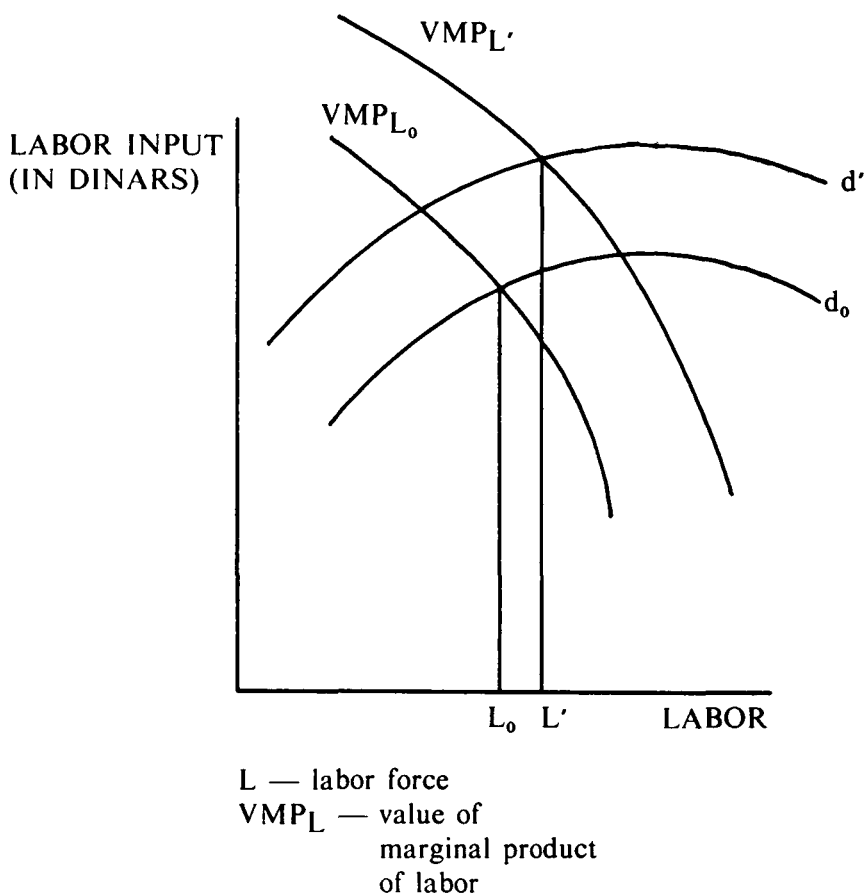


Figure VI graphically represents a firm producing two products,  $X_1$  and  $X_2$ , with one variable input, labor ( $L_1 < L_2 < L_3 < L_4$ ) and a fixed capital supply. Should the price of  $X_1$  increase relative to  $X_2$ , the firm will shift production from point  $a$  to  $a'$  in accordance with the change in the price or exchange ratios,  $f-f$  and  $f'-f'$ . The output of  $X_1$  therefore increases in contrast to the previous analysis involving only one product. The new expansion path,  $e'-e'$ , can be used to derive the new dividend curve which will be greater than before since total employment is still  $L_4$  while the value of the total output is now higher with the increase in the price of good  $X_1$ . Depending on the subsequent increase in the value of marginal product of labor ( $VMP_L$ ), employment may even rise as shown in Figure VII.<sup>100</sup>

100. Adapted from *id.*, at 55, Figure 3.5.2.

FIGURE VII



While it is theoretically possible for  $L'$  to be below  $L_0$  in Figure VII, it is unlikely because of the second divergence of reality from the one output-one variable input theoretical model — the existence of more than one variable input. Vanek's model takes this into account in his more complex formulation and finds that where there are other possible recombinations of inputs, a "social short and long-run adjustment" will occur.<sup>101</sup>

With labor ostensibly the major beneficiary in a workers' self-managed system, a reduction in the labor force of a firm will be rare as will be negative supply elasticities. While layoffs have been noted,<sup>102</sup> the

101. See *id.*, at 56-57. As Ivan Maksimovic argues, "The abundance of variables inherent in Yugoslav economic practice and history destroy the simplicity and consistency of the theoretical model. . . ." Maksimovic, in *YUGOSLAV WORKERS' SELFMANAGEMENT*, *supra* note 40, at 132.

102. Ward refers to articles reporting such layoffs in *Ekonomska Politika, Borba*

decline in the industrial labor force was rather nominal.<sup>103</sup> Vanek's conclusion that there is a significant downward rigidity of employment appears to be justified and, in any event, Dubravcic notes that

[i]t can be assumed safely that the information available to management — including decision-making techniques — will not be accurate enough to induce them to react to changes in prices in the paradoxical way postulated for the L *co-op* model. . . .<sup>104</sup>

As noted above, the firm in Hungary operates under certain administrative constraints set down by the State. Since the initial problem with any reform of central planning is unemployment,<sup>105</sup> the planners of the NEM established two crucial controls — “absolute average wage control” (actually a carry-over from the mid-1960s) and a “retention rule” for managers to follow. Average wage control, as explained earlier,<sup>106</sup> provides an incentive for managers to keep their average wage rates down. Failing to do so will result in a lower profit sharing fund after taxes. The retention ratio of the development fund, in proportion to the profit-sharing fund, is set equal to the firm's capital-labor ratio. This is a further incentive for the manager to produce in a more labor-intensive fashion as his income is so dependent on the size of the participation fund.<sup>107</sup> The result which faces the firm is a micro-supply curve of labor,  $S_L$ , such as that in Figure VIII, in which the supply of labor increases as wages increase, but only up to a certain point.

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and *Rad*, all in 1967. See Ward, *supra* note 67, at 573.

103. See Markovic, *National Income, Employment and Productivity in the Yugoslav Economy, 1947-1968*, 11 YUGOSLAV SURV. 50, 52 (1970).

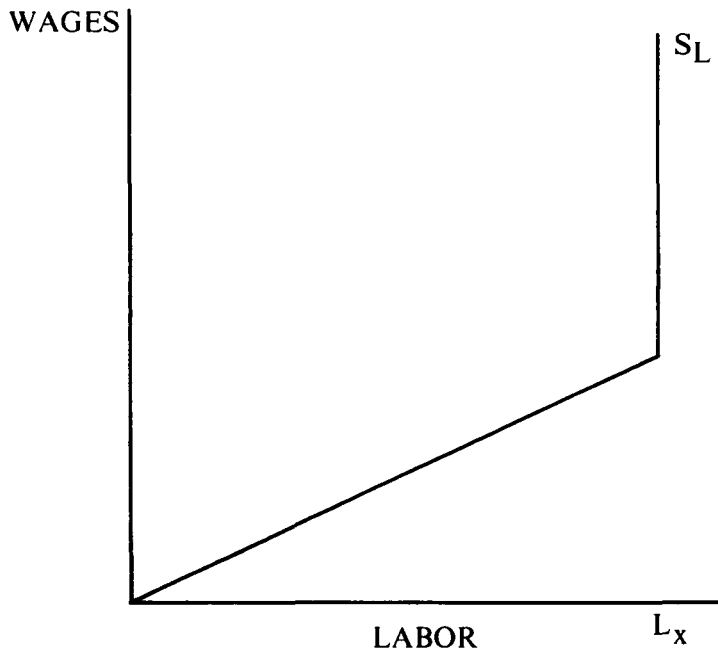
104. Dubravcic, *supra* note 79, at 304.

105. Gamarnikow notes that as the system of central planning gave no incentive to reduce superfluous labor, extra workers were hired for the sole purpose of insuring that production plans would be fulfilled if there were last minute problems. When profitability becomes the operating principle, these low-productivity workers are released. Inflation may also result unless competition for the most skilled labor is contained. This is another rationale for imposing average wage control. See M. GAMARNIKOW, *supra* note 34, at 128, 133.

106. See *supra* note 70 and accompanying text.

107. See Portes, *supra* note 68, at 309.

FIGURE VIII



More specifically, because of average wage control, the labor supply curve will be relatively elastic (*i.e.*, responsive to wage-rate changes). Given low average wages, more workers (especially women) will be brought into the labor force to maintain family income.<sup>107.1</sup> And, contrary to the situation facing the Yugoslav firm, there is a positive incentive for the manager to hire this low-cost, low-productivity labor up to the point where full employment is reached. At this point,  $L_x$  on Figure VIII, increased competition for labor results in more labor turnover and higher wages within the limits set by the State, with, however, no greater supply of labor in net terms. This is the situation facing Hungary.<sup>108</sup>

Limiting our case to a labor surplus situation, the Yugoslav and Hungarian firms can be compared as in Figure IX below.

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107.1 See generally Diehl, *Second Jobs Bring Many Hungarians to Good Life—But at a "Really Tough" Price*, L.A. Times, Apr. 20, 1986, § 1, at 16, col. 2 for recent support of this proposition.

108. See Portes, *supra* note 53, at 655.

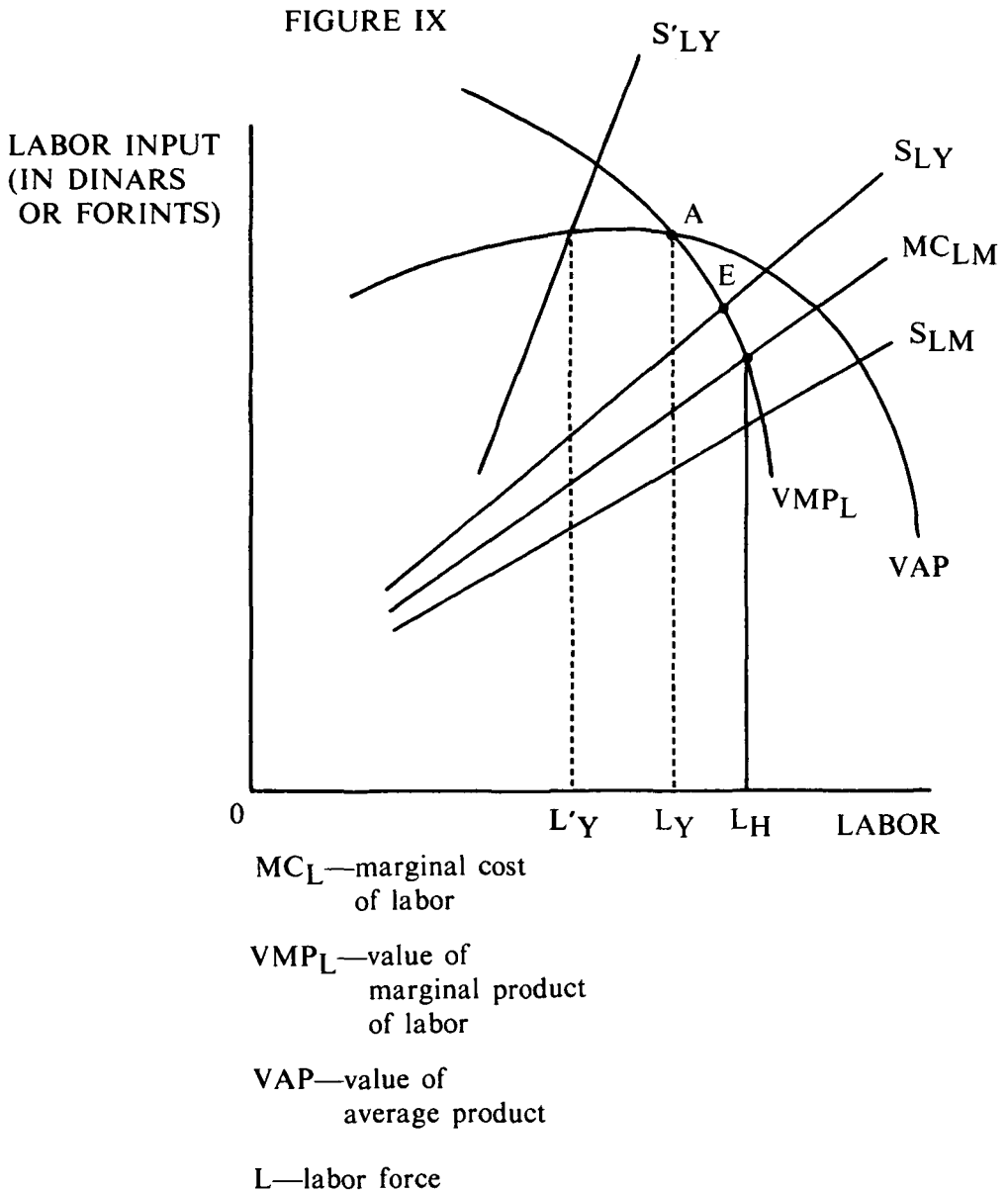


Figure IX assumes that the firms produce with the same productivity (an unrealistic assumption which will be dispensed with below). The Hungarian firm acts as a monopsonist as it has no fixed supply of labor and is willing to acquire or utilize as much labor resources as are available and economically efficient on a marginal cost basis. Therefore, it hires up to the point ( $L_H$ ) where the marginal cost of labor ( $MC_{LH}$  marginal to the wage rate  $S_{LH}$ ) equals the value of that labor's marginal product ( $VMP_{LH}$ ). Without the incentives present in the

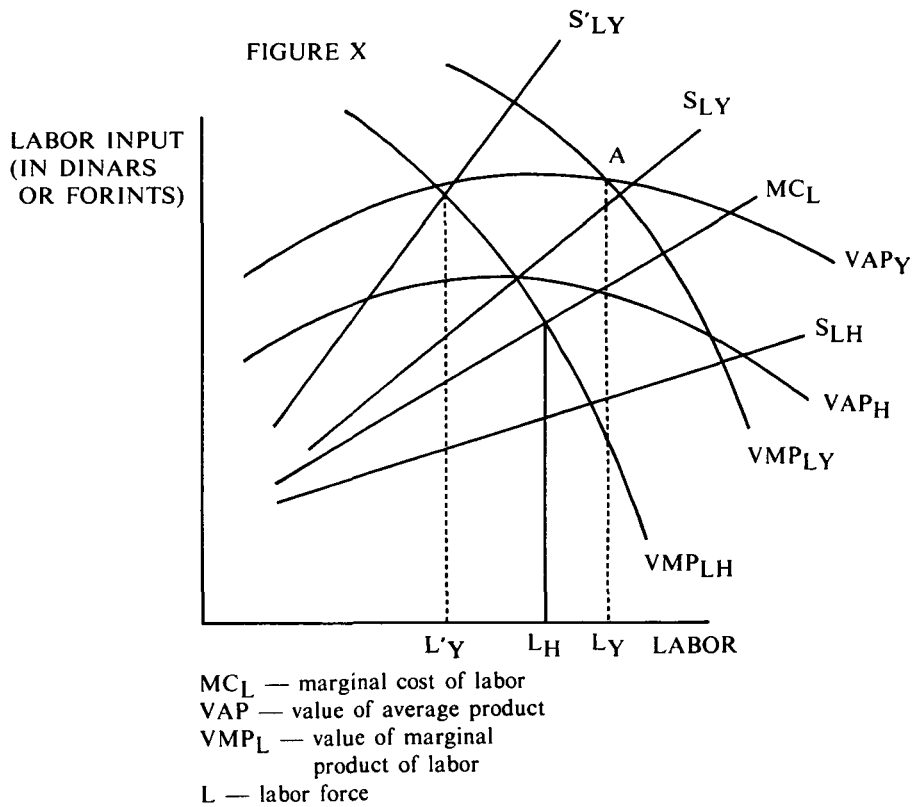
Hungarian system, the Yugoslav firm faces a less elastic supply curve. Since the undertaking will have a fixed supply of labor in the form of the members of its co-operative, it will hire a complete labor force along  $S_{LY}$  or  $S'_{LY}$ . Were the relevant curve to be  $S_{LY}$  (or any other curve where E is to the right of A), only  $L_Y$  will be hired because that is where the average income per worker is maximized.

Should the firm face a curve such as  $S'_{LY}$ , labor will be hired up to where it contributes more to average income than to costs (see Figure III *infra* as well). In any event, the labor force in a Yugoslav firm will be less than in an equivalent, theoretical Hungarian one ( $L_Y < L_H$ ). However, as shown in Figure X, the value of the marginal product of labor in Hungary is less than that in Yugoslavia ( $VMP_H < VMP_Y$ ) and the value of the average product of labor in Hungary is less than that in Yugoslavia ( $VAP_H < VAP_Y$ ), due to both the Hungarian propensity to hire low-productivity labor, and Yugoslavia's relatively high-productivity labor, a result of its capital-intensive production to be discussed below.<sup>109</sup>

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109. In the early years of the NEM labor productivity increases were a great disappointment. In Yugoslavia's early period, before the full effects of the 1965 Reform were felt, productivity grew at different rates, depending on the industry involved. Industrial productivity was on the higher side generally. See Horvat, *Yugoslav Economic Policy in the Post-War Period: Problems, Ideas, Institutional Developments*, 63 AM. ECON. REV. (Supp.: "Surveys of National Economic Policy Issues and Policy Research") 116 (1971).





Depending on both the supply elasticity of labor and the actual amounts by which Yugoslav productivity exceeds that of Hungary, the Yugoslav firm may produce less ( $L'_Y$ ), the same or even more than its Hungarian counterpart ( $L_Y$ ,  $L_H$ ).

Note that, should the workers' self-managed firm originally find itself at  $L'_Y$ , an increase in its productivity through the use of more capital (along its expansion path in Figure XI below) would most probably push it closer to  $L_H$  in Figure X and towards  $L_Y$  rather than reducing employment. This is a result of the natural aversion of workers to technological developments which tend to displace jobs. If anything, investment might be used to complement rather than to displace labor. Therefore, the results of this theoretical analysis are indeterminate. However, it appears on this evidence that the introduction of workers'

self-management does not, in and of itself, have a causal effect on either production or employment.

### C. Investment and the Structure of Employment

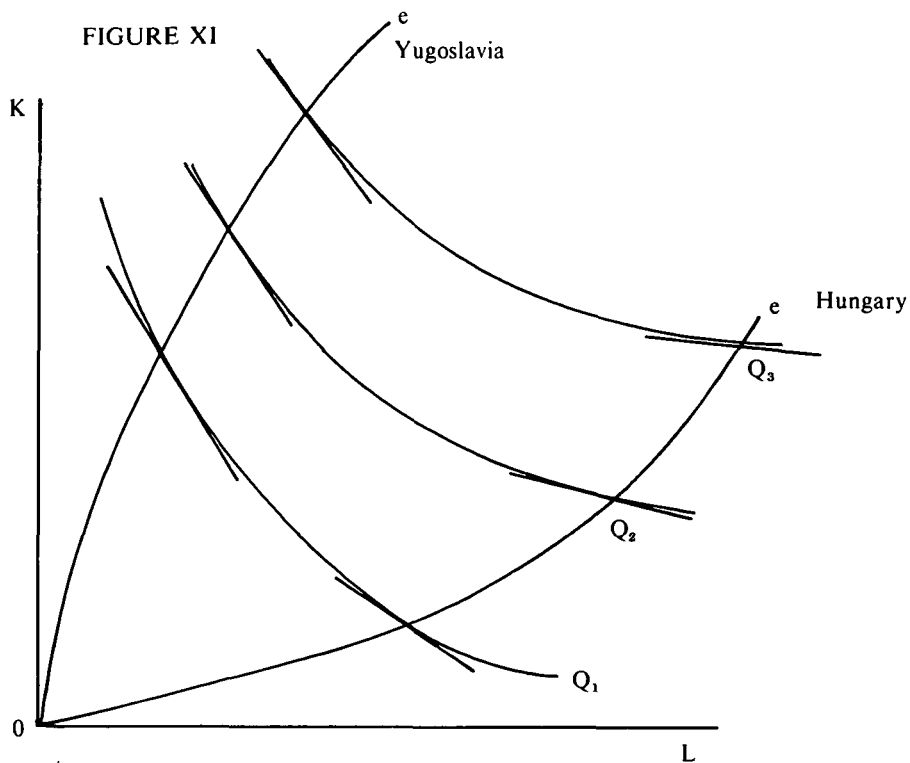
Turning to the long-term adjustment process, we find that workers' self-management contains an inherent bias towards capital intensive production techniques. If both capital and labor can vary over time, the expansion path of production will be the locus of points tangent to the isocost lines and production isoquants shown in Figure XI below.<sup>110</sup> If we assume the production isoquants are the same for any product in both countries, we can derive the isocost lines as follows:

YUGOSLAVIA	$a = \frac{P_x X - iK}{L}$ $aL = P_x X - iK$ $aL - P_x X = -iK$ $\therefore K = -\left(\frac{a}{i}\right) L + \frac{P_x X}{i}$	$a$ = net labor productivity $P_x$ = price of product $i$ = interest rate $K$ = capital employed $L$ = labor force $W$ = wage rate $VTP$ = value of total product $TCpme$ = total cost of profit-maximizing enterprises
HUNGARY	$VTP = P_x X$ $0 = P_x X - iK - wL$ $0 = VTP - TCpme$ $\therefore VTP - TCpme = P_x X - iK - wL$ $- TCpme = -iK - wL$ $- TCpme + wL = -iK$ $\therefore K = -\left(\frac{w}{i}\right) L + \frac{TCmpe}{i}$	

As "a" is greater than the wage rate ("a" being optimum net labor productivity or a "full wage," including rewards for both entrepreneurial input and labor input), the slope of the expansion path in Yugoslavia is bound to be greater, *i.e.*, more capital intensive than in Hungary.<sup>111</sup>

110. An isocost line identifies all possible combinations of inputs (capital and labor in this model) when total cost is held constant. An isoquant curve traces all combinations of capital and labor that generate a specified level of output.

111. See Dubravcic, *supra* note 79, at 303. Note that Figure XI postulates that both expansion paths will eventually curve back to a more balanced mix for reasons to be discussed below.



Ward reaches the same conclusion:

The Illyrian firm will have a tendency to invest in more capital-intensive processes than its [profit-maximizing] counterpart, even to the point of occasionally investing under conditions in which profits (but not profits per worker) are expected to fall.<sup>112</sup>

This obviously leads to a misallocation of resources and, if carried to its extreme, results in firms operating high up on their respective average cost curves with extensive under-utilization of capacity. But as the labor-managed firm will be especially sensitive to risks as well as to investments resulting in a loss of jobs, such excessive capital-intensive investment would probably be ameliorated in practice. Since under-uti-

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112. B. WARD, *supra* note 30, at 212. This has resulted in a general slow down of the per annum percentage increase in employment (outside of private agriculture). See Horvat, *supra* note 109, at 91, Table 3.

lized investments involve higher fixed costs (in terms of overhead and maintenance) not covered by any subsequent production, average income would be lowered and investments of this sort would in turn be contained within limits.<sup>113</sup>

Conversely, the Hungarian firm, with its proclivity towards labor-intensive production, also tends to misallocate resources. Besides the incentive of average wage control, "growing production needs and 'false humanitarianism' influenced many enterprises to keep or expand their work force."<sup>114</sup> More recent incentives to transfer surplus labor have been initiated but may not have been fully felt at all levels of the economy as yet. There may also have been a slight trend towards more capital investment.<sup>115</sup> Although the results are inconclusive and recent statistical data would be required to support the hypothesis, it appears that Yugoslav capital investment is higher than that in Hungary, concomitant to Yugoslavia's capital-intensive propensity relative to a Hungarian profit-maximizing firm.

## VII. CONCLUSION

The foregoing analysis presents two broad categories of conclusions. First, the differences between the operation of a workers' self-managed firm and a profit-maximizing firm, both producing under market socialism, are indeterminate. Depending on the labor supply curves facing each firm and the relative productivity of that labor, the workers' self-managed firm might produce more or less (and hire more or fewer workers) than its Hungarian counterpart. In any event, the differences are probably small because of practical considerations which concurrently shift the two closer together.

Second, the differences in output, employment and investment priorities between the two models are not due solely to the introduction of workers' self-management into the market socialist environment. The administrative measures, such as average wage control, which have been instituted in Hungary to combat certain problems accentuate the differences. If these controls were eliminated and taxes equalized the size of both firms' profit-sharing funds, the two would operate at more nearly comparable levels.

Even here, however, the results are indeterminate because the labor supply curves may again differ with different outputs, even though

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113. For data which supports this supposition, see *Percent of Capacity used by Yugoslav Firms 1965, 1966*, 9 YUGOSLAV SURV. 85 (1968).

114. Racz, *Assessing Hungary's Economic Reforms*, 17 E. EUR. 4 (1968).

115. See generally F. SINGLETON, *supra* note 24, at 150-66.

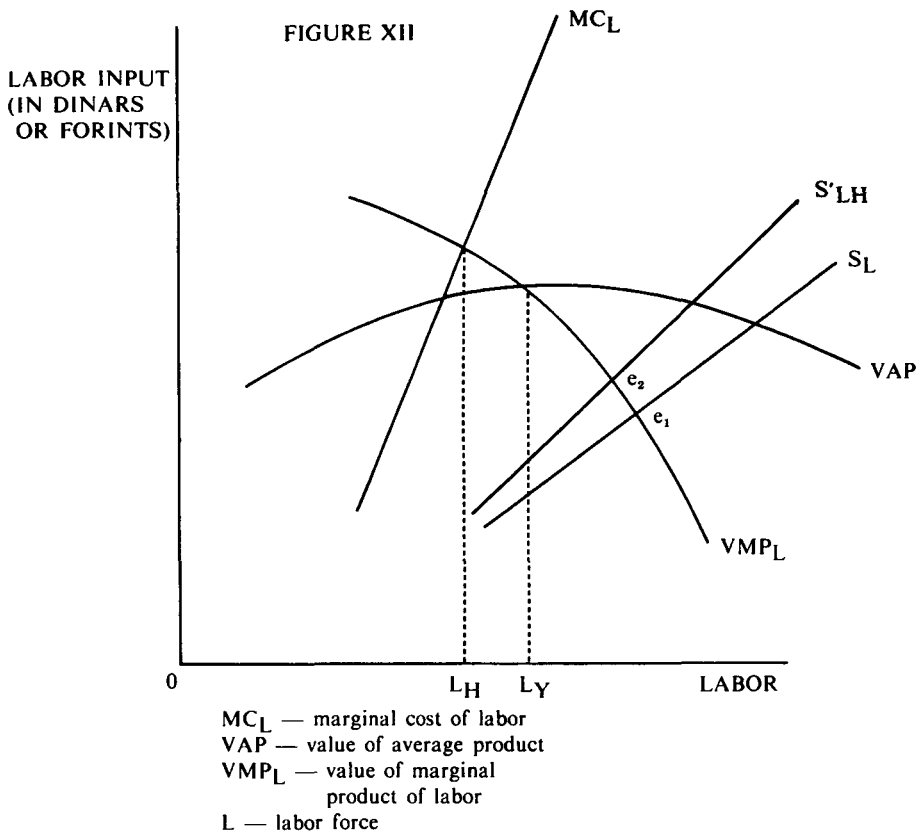
the  $VAP_L$  and  $VMP_L$  may be identical.<sup>116</sup> However, since the Yugoslav firm operates in a labor surplus economy where labor (even of a quality comparable to Hungarian labor) should be cheaper, it may face a relatively more elastic curve than the Hungarian firm operating without average wage control.<sup>117</sup> Therefore, as shown in Figure XII below, the Yugoslav firm will produce at  $L_Y$  (where average income per worker is maximized) given  $S_L$  as its labor supply curve. It does not reach the social optimum,  $e_1$ , yet is no further than the Hungarian firm from *its* respective social optimum,  $e_1$ , when the latter produces at  $L_H$ .

Even if the elasticities of both were the same at point  $S_{LY}$ , Hungary would still produce and hire less since it must use its marginal curve to maximize profits. The result is indeterminate again but may, in fact, bring the firms closer together in their actual operation.

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116. See Figure IX *infra* page 119. Indeed, it has been noted that employment has expanded in Yugoslavia by over 1,700,000 jobs in the past ten years and that its unemployment problem "is considerably less severe than other developing countries." Orbe III, *supra* note 49, at 625, 637-38. The fundamental problem stemming from the theoretical anti-labor intensive bias is far from solved, however. See *id.* at 634.

117. One might question whether workers with skills equal to those in Hungary would work for lower wages.



Hence, while the implications of workers' self-management are numerous when compared to a market socialist model in which necessary controls of the type utilized in Hungary's NEM are introduced, workers' self-management does not appear to detract significantly from the firm's operation nor from its production and employment levels. Its propensity towards capital-intensive production is significant, but without the aforementioned Hungarian controls, the latter would probably move closer to Yugoslavia in its capital-output ratio than it currently is. And, in any event, there are intangible rewards from the Yugoslav

labor-managed system — fewer employee-employer conflicts;<sup>118</sup> better organization of collective consumption (*e.g.*, housing, child care services and recreational activities); an environment more conducive to retraining and on-the-job training; and greater inducement for minor innovations, as the innovator can receive direct benefits from his ideas.<sup>119</sup> These intangibles *may* help to counteract other adverse effects of workers' self-management.

It is, therefore, possible that, although a Western joint venture partner would find that a Yugoslav workers' council approaches decisions on a different basis and with different motivations than Western management would in a capitalist context, the differences may not be so much due to workers' self-management but to the entire framework of market socialism.<sup>120</sup> Professor Coughlin's remark that "a deeper understanding" is desirable is thus well taken. Western joint venture partners should clearly expect to face a motivational gap, with resulting effects on decisions regarding a broad panoply of microeconomic indicators.

Nonetheless, similar gaps and results may be found in any joint venture in a market socialist system. As indicated in this study, for example, a Hungarian joint venture partner might react quite similarly to a Yugoslav counterpart in various circumstances, even in the absence of workers' self-management.

The next step to further Professor Coughlin's analysis would be to apply recent, comparable and reliable data to this theory in order to solve the many indeterminacies I have noted. Of special importance would be detailed employment figures, capital-labor and capital-output ratios, breakdowns on workers' income (as between wages and profit shares), and the like. Such data should also help explain some of the unanswered or partially answered questions which remain.

Finally, of vital interest would be a recent subjective study comparing Western companies which have actually entered into joint ventures with those which have considered but rejected plans to invest in a joint venture in either or both Yugoslavia and Hungary. In a commentary on Professor Coughlin's study, two observers summarized a number of studies involving actual investments in Yugoslavia alone.<sup>121</sup> However, they did not also interview companies which had contemplated but did not follow through with similar plans, nor were other

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118. See Kamusic, in YUGOSLAV WORKERS' SELFMANAGEMENT, *supra* note 45, at 98 and 100, Tables V and VII.

119. See Vanek, *supra* note 88, at 1012; J. VANEK, *supra* note 87, at 258 and 264.

120. Cf. Orbe III, *supra* note 49, at 631 (emphasizing a mix of factors).

121. See Artisien & Buckley, *supra* note 7.

non-market economy joint ventures studied. Such a comparative empirical study would perhaps better indicate why such joint ventures have been formed or rejected and where the difficulties were perceived by the actual parties to such arrangements. Also, such a study could more conclusively confirm that workers' self-management played only a small (if any) role in these decisions and that many of the other factors which both Professor Coughlin and Professors Artisien and Buckley recite (drawing on previous studies of Yugoslav joint ventures only)<sup>122</sup> will seem much more important.

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122. See Coughlin, *supra* note 1, at 21-25; Artisien & Buckley, *supra* note 7, at 168-70. Indeed, one author has commented that Western firms have been hindered as well by Yugoslavia's "deep-seated fear of the potential abuses of a pervasive multinational presence in the country" and not only by the risk-avoidance behavior inherent in a workers' self-management system. See Orbe III, *supra* note 49, at 632-34.



## APPENDIX

*KEY TO SYMBOLS*

- a — net labor productivity (entrepreneurial efficiency in labor co-op)
- D — net income
- i — interest rate
- K — capital employed
- L — labor force
- $MC_L$  — marginal cost of labor
- $MR_L$  — marginal revenue of labor
- MP — marginal product of labor
- o — profit
- $P_X$  — price of product X
- $TC_1$  — total cost of producer (labor-managed) co-op
- $TC_{pme}$  — total cost of profit-maximizing enterprises
- VAP — value of average product
- $VMP_L$  — value of marginal product of labor
- VTP — value of total product
- w — wage rate
- X — output of product X
- H and Y used as subscripts — Hungary and Yugoslavia, respectively.