East European Economies

By Alan A. Brown and Egon Neuberger

US CONGRESS, JOINT ECONOMIC COMMITTEE: *Economic Developments in Countries of Eastern Europe—A Compendium of Papers.* Washington, DC, US Government Printing Office, 1970.

ECONOMIC ANALYSIS of the development of the countries of Eastern Europe is coming of age in the United States. As the dominance of the USSR over the political and economic affairs of the East European states comes under challenge, so too does the dominance of Soviet studies over East European studies. When the countries under observation were still satellites of the Soviet Union, slavishly imitating Big Brother, the attention of academic and government scholars—as well as research support—was chiefly concentrated on Soviet developments. But since ripples of independence have begun to surface and merge with successive waves of economic reform in Eastern Europe, the tide of Western research has begun to turn toward a greater interest in the economics of these states.*

Of course, study of East European economies cannot be totally divorced from the study of the Soviet economy. In fact, the real interest in analyzing the former lies in the fact that Eastern Europe has served—for better or for worse—as a testing ground for application of the Soviet model of economic development under very different conditions from those prevailing in the Soviet Union. The analyst of East European economic happenings could also reasonably be expected to benefit from the experience of earlier studies of the Soviet economy, or to borrow a phrase from Alexander Gerschenkron, to enjoy "the advantages of relative backwardness." Scholars of Soviet economics have long since hammered out many thorny issues of theory and statistical methodology. Furthermore, today's researcher may also apply the "technological improvements" of econometric analysis to the accumulating store of East European statistical data. Whether they do or not is another question, to which we shall return presently.

There are a variety of complementary approaches the researcher may take toward analysis of the economy of one or more East European countries, and it would be useful at this point to briefly outline the most salient. The first approach or step should probably be the construction of a model—either quantitative or qualitative. One must select appropriate criteria from which to evaluate performance (*e.g.*, the goals of the system's directors, to use Abram Bergson's phrase [1]) and must also choose the sets of variables to explain a given performance. In operational models, these variables are connected according to given functional relationships. Even if construction of a full-fledged econometric model is not feasible, there should at least be a clear statement of the hypothesis to be investigated and presentation of a conceptual framework of the economic process which identifies key variables and describes their relationships qualitatively. Once the theoretic framework is presented, the next step is to evaluate the available statistical data (input and output series). If the data are not sufficiently comprehensive or reliable, one may find it necessary to construct independent series.[2]

Having constructed a frame-

*An expanded version of this article is available in A. A. Brown and E. Neuberger, "Economic Analysis of Eastern Europe—A Review Essay," Stony Brook Working Paper No. 24, State University of New York, Stony Brook, February 1971.

[1] "The system's directors in the USSR seek diverse goals, but a cardinal concern is to assure the rapid growth of the economy." Bergson, *The Economics of Soviet Planning,* New Haven, Yale University Press, 1964, p. 7.

[2] The classic example of independently calculated Western series is Abram Bergson's "Adjusted Factor Cost Standard" (AFCS). Professor Bergson makes two kinds of adjustments for distortions in ruble prices in his calculation of Soviet real national income: 1) to assess the production potential, he recalculates national income on the basis of factor cost; and 2) to evaluate consumers' welfare, he recalculates household consumption by means of adjusted market prices. See his *The Real National Income of Soviet Russia Since 1928,* Cambridge, Mass., Harvard University Press, 1961, Chapters 8-11.

work, one has specified performance criteria; having solved the measurement problem, one has obtained appropriate data on inputs and outputs. The third step is to evaluate performance. This may be based on comparison with the given country's past performance (by means of a time series) or on comparison with the performance of other countries (by cross-sectional analysis). In the latter case, one must select an appropriate control group, *e.g.*, other countries at similar levels of development but with different economic systems, or countries at different levels of development with similar systems.

The comments which follow will concentrate (like the papers in the reviewed volume) on these three questions of models, measurements, and performance analysis. However, there are several other approaches which deserve mention in passing, even though their extensive application at this point of time may be precluded by the state of the art of Eastern-Europe-watching. For example, one may seek

to assess the quantitative significance of a given event in a differential fashion, that is to say, by comparing it with a situation that would have obtained in the absence of that event. . . . Asking such questions has come to be known as "counterfactual history." [3]

An example would be to analyze the hypothetical performance of Soviet agriculture assuming collectivization never occurred. Still another technique is to utilize abstract econometric models to simulate the hypothetical sensitivity of performance to certain changes in variables. When applied to historical data, this becomes "counterfactual history."

Finally, economists often go beyond description and analysis to attempt the prediction of future events. Unlike "counterfactual" history," which posits a radical change in one key variable, forecasting assumes that the model remains basically intact. The forecaster attempts to foresee the small, marginal changes likely to occur in key economic variables, if the underlying functional relationships remain unchanged.

WITH THESE methodological considerations in mind, we can now turn to examination of *Economic Developments in Countries of Eastern Europe: A Compendium of Papers,* published in 1970 by the Joint Economic Committee (JEC) of the US Congress. This ambitious undertaking, conceived by the late Leon Herman, examines key aspects of economic development in all East European countries, except Albania. The sixteen contributors to the *Compendium* address such topics as economic growth and productivity; demography and manpower; industry, energy, and agriculture; consumption and military spending; the utilization of computers; and the incipient growth of the automobile industry in Eastern Europe. There is also a brief treatment of the developments in Comecon (the Council on Mutual Economic Assistance), the two Germany's, and Yugoslavia.

The JEC collection is based in part on published and unpublished work of the Research Project on National Income in East Central Europe, formerly affiliated with Columbia University.[4] (Before long, analysts of East European economics should be able to sample the fruits of two other major research projects: (1) Papers and monographs sponsored by the project on East European economic development and systemic changes at Indiana University's International Development Research Center; and (2) Proceedings of the Research Conference on Economic Reform in Eastern Europe, sponsored by the Comparative Economic Program and the Center for Russian and East European Studies at the University of Michigan.)

Any one accustomed to the increasing sophistication of the JEC's earlier studies on the Soviet economy will doubtless be disappointed by this present collection on Eastern Europe.[5] First, the *Compendium* suffers from the lack of a unifying conceptual framework such as we discussed above. Second, the quality of the contributions is uneven, and too many of the underlying data are unfortunately omitted. Nor is there any apparent consistency in the methodology of calculations. Third, none of the recalculations of official East European data series appears to have been submitted to the critical comments of those who pioneered in research on Soviet output and input indexes. Likewise, there is a not-

[3] Alexander Gerschenkron, "Economic History and Economics," in Alan A. Brown, Egon Neuberger, and Malcolm A. Palmatier, Eds., *Perspectives in Economics,* New York, McGraw-Hill, 1971, p. 8.

[4] The list of monographs and Occasional Papers, published and unpublished, appears in the *Compendium,* pp. 65-66. Other "manuscripts will be published as Occasional Papers in due course" (p. 65).

[5] The earlier JEC studies included: *Comparisons of the United States and Soviet Economies,* Washington, DC, US Government Printing Office, 1959; *Dimensions of Soviet Economic Power,* Washington, DC, US Government Printing Office, 1962; and *New Directions in the Soviet Economy,* Washington, DC, US Government Printing Office, 1966.

able lack of reference to seminal works on recalculations of Soviet data.

As for other methodological approaches to the study of East European economies, most of the papers do include time series, and many make cross-sectional comparisons. The papers on demography, the labor force, and energy also make projections into the future. The contributors generally eschewed techniques such as counterfactual history and sensitivity analysis, probably wisely leaving these sophisticated games to future economic historians, who will be able to operate on firmer ground.

Turning to some specific observations on the papers in the JEC's *Compendium,* we find it logical to start with John Hardt's study which, alone among the papers, constructs a model, based on the following premise:

An overarching factor guiding and limiting East European economic development has been the sovereignty asserted by the Soviet Union (p. 6).

He argues that this Soviet dominance resulted in a common pattern of development for the East European states, and in foreign economic relations geared to Soviet needs. Controlled by a Soviet-type central planning system, the development pattern stressed heavy industry and relegated light industry, foodstuffs, transportation, and housing services to the status of buffer, or low-priority, sectors. The pattern of the foreign trade of Eastern Europe during the Stalinist period (late 1940's and early 1950's) provided substantial gains to the USSR in relieving production bottlenecks, but at a very high cost to the East European economies. Incidentally, Hardt contends that "economically the Soviets gained *less* than the East Europeans lost" (p. 14), a very provocative statement which, while not unreasonable on the face of it, is not supported anywhere in this or any other essay of the *Compendium.*

Hardt suggests that East European economic development, while similar in many respects to that of the Soviet Union, has differed from that model in three important aspects: first, the external influence of the Soviet Union; second, the national-ethnic and institutional characteristics of the various countries (historical legacies); and third, the small size of the countries involved. There is a fourth difference that is implicit in the paper—the differential level of economic development (*e.g.,* in Czechoslovakia and East Germany the Soviet model was applied to countries in many ways more developed than the USSR).

According to Hardt, application of the Soviet development model in Eastern Europe achieved short-term successes, such as the building of an industrial base in each country, the improvement and modernization of military forces, the providing of assistance to Soviet economic development, and the generation of increased economic dynamism in Eastern Europe (compared to the general stagnation of the interwar period, particularly the 1930's). He also lists many failures, notably the lag in agriculture that changed Eastern Europe from a net exporter to a net importer of foodstuffs, the inability to sustain a high rate of growth over the long run, Stalin's inability to achieve bloc-wide economic integration (which might have provided Eastern Europe the benefits of a large, unified market), and various systemic legacies which impede necessary economic reforms today.

It is to the need for and the problems attendant to achieving economic reform in Eastern Europe that Hardt devotes the second part of his paper. He tentatively concludes that the reforms necessary to solve the critical discrepancy between failing performance and rising popular expectations (we might think of this as a new type of "scissors crisis") would have to be of a more fundamental nature than Soviet and East European leaders are likely to accept.

THE HARDT PAPER might have served as a frame of reference or an initial model for the other studies in the *Compendium,* but the remaining papers fail to discuss this model or even to outline such elementary matters as the overall goals of the individual economies studied or individual policy objectives—*e.g.,* economic stability, external equilibrium, or "equitable" distribution of income. The articles concentrate heavily on measurement of the traditional performance variables—growth of output, of productivity, and of per capita consumption, as in Thad P. Alton's "Economic Structure and Growth in Eastern Europe," Edwin M. Snell's "Economic Efficiency in Eastern Europe," Terence E. Byrne's "Levels of Consumption in Eastern Europe," Imogene Edward's "The Passenger Car Industries of Eastern Europe," J.G. Polach's "The Development of Energy in East Europe," Laszlo Czirjak's "Industrial Structure, Growth and Productivity in Eastern Europe," and Gregor Lazarcik's "Growth of Output, Expenses, and Gross and Net Output in Eastern European Agriculture." Measurement of labor inputs is also treated

in a number of papers; however, with the exception of a brief discussion of education and health in the Snell study, the question of investment in human capital is ignored (*i.e.*, the volume concentrates on the quantitative, not the qualitative, aspects of labor inputs).

The majority of the articles dealing with the measurement problem and the evaluation of performance are based on the results of arduous labor by members of the Project on National Income in East Central Europe, mentioned above. They report series on gross national product (GNP) and on the output of various industrial branches and of agriculture, based on diverse official time series which have been adjusted through a complicated multistage aggregation process. As the authors themselves warn the reader, there are many problems connected with this approach.

In light of these problems, it is unfortunate that no alternative series, using different weighting specifications, are presented. The series presented generally employ weights based on mid-1950's data, despite significant structural changes in East European economies since that period. In countries with rapidly changing structures, the "index-number problem"—*i.e.*, the selection of base years for pricing inputs and output—is particularly critical, as noted by students of the Soviet experience, as well as by Alton and other contributors to the *Compendium*. Given the more uneven development of economic sectors in Eastern than in Western Europe, the choice of earlier prices for weighting rather than later prices tends to favor Eastern Europe in terms of growth-rate comparisons. One is also surprised by the use of a single rate of return on capital (10 percent) for recalculations instead of the customary two alternatives used in similar Western estimates of Soviet aggregate output series.[6] It is a pity that contributors to this collection passed up the opportunity to test whether the rate of growth is sensitive to alternative assumptions about the rate of return on capital.

There are other aspects of the GNP measurements which are disturbing. For example, Alton reports a stable pattern of growth for the Hungarian economy in the 1950's (p. 46). Official statistics show absolute declines in 1952, 1954 and 1956, with a particularly sharp drop in 1956. Alton's series shows only one very mild dip in 1956. The reader is particularly puzzled by this divergence when he learns that Alton's recalculated index gives a much larger weight to agriculture than does the official Hungarian index. Both 1952 and 1954 were bad years for Hungarian agriculture, and one would have expected Alton's GNP figures for those years to reflect the agricultural setbacks. The question should be pursued further, since a thorough analysis of growth ought to consider cyclical fluctuations.

It is a pity that the obvious wealth of available data on inputs and outputs was not used for a systematic analysis of the factors behind the growth of output.[7] Only Snell attempts to assess various aspects of comparative economic efficiency, but, despite his citation of the *New Directions* studies,[8] he fails to utilize the excellent methodological foundation developed therein.

Czirjak also examines the problem of productivity, but his method of measurement is outdated and his analysis confused. To address the latter point: we are told that "the real restraint of growth . . . is likely to be the short supply of capital. The declining productivities observed for Eastern Europe reflect these considerations" (p. 443). In fact, capital-output ratios have been increasing in Eastern Europe, while the growth rate of output has declined, a situation which suggests a relative abundance of capital. Although Czirjak does at one point acknowledge that "the declining productivity of capital may be a sign of capital substitution for labor, among other things" (p. 439), he fails to draw the logical conclusion that East European economies probably have found it increasingly difficult to digest massive infusions of capital. In effect, capital is becoming a less and less suitable substitute for labor as a spur to increased production.[9]

A final comment should be made concerning the method employed in the *Compendium* for calculating the average annual rates of growth reported in the various

[6] For example, on p. 303 of *New Directions . . .*, alternative rates of 8 and 13 percent were used.

[7] See for example the measurement of the contribution of technological change to growth in Edward F. Denison, *The Sources of Economic Growth in the United States and the Alternatives Before Us*, Supplementary Paper No. 13, New York, Committee for Economic Development, 1962, and also his *Why Growth Rates Differ*, Washington, Brookings Institution, 1967.

[8] He cites, *e.g.*, Michael Boretsky, "Comparative Progress in Technology, Productivity, and Economic Efficiency: USSR vs USA," *New Directions . . .*, pp. 133-256.

[9] In fact, preliminary calculations show that in Hungary the elasticity of substitution has approached zero. See A.A. Brown, "CES Production Function Estimates in Postwar Hungary," IDRC Internal Research Memorandum, MS, Bloomington, Indiana, International Development Research Center, Indiana University, May, 1970.

papers. The only clue we find to the methodology utilized is a footnote to Alton's paper (p. 63), which states that the average annual rates were calculated by the "least-squares" method. Would that this were true; in fact, a check reveals that the growth rates reported by Alton are based on averages between beginning and end years. Similar averaging seems to have been employed in the other papers as well. Such an approach runs the risk of introducing distortion, because of possible unusual circumstances in either one of the terminal years. The least-squares method, a widely accepted statistical approach, takes *all* observed years into account and thereby eliminates terminal-year distortions.[10] Indeed, the effort to fit a least-square estimate to the Hungarian data would have been worth the effort. While Alton shows (p. 62) Hungarian GNP growing at 5.4 percent annually between 1950 and 1955 and at 3.9 percent annually between 1955 and 1960 (*i.e.*, the growth of GNP apparently decelerated markedly in the later period), the least-square estimate fitted to his own series of data on annual growth rates would have given nearly identical rates for both five-year periods (4.7 and 4.6 percent, respectively).[11]

We have highlighted some of the problems raised by the material presented in the JEC's *Compendium* not as a condemnation of the volume but as a warning that caution should be exercised in using the valuable statistical data presented therein. This collection has initiated a movement in the analysis of East European economics from the stage of underdevelopment to one in which the preconditions for sustained growth (hopefully in quality even more than in quantity) will have been established. The Indiana and Michigan projects mentioned earlier should complete this preparation for the takeoff.

[10] For a thorough discussion of alternative rate-of-growth calculations, see Boris P. Pesek, "Economic Growth and Its Measurement," *Economic Development and Cultural Change* (Chicago), April 1961, pp. 295-315.

[11] The least-square estimates come from the IDRC Data Bank, Indiana University.

Revisiting Russia

By Robert F. Byrnes

RUSSIA OBSERVED: Series I and II (91 reprints of eyewitness accounts of travelers to Russia from Tsarist times to the Second World War, selected by Harry W. Nerhood and Harmon Tupper). New York, Arno Press, 1970 and 1971.

RUSSIA HAS LONG been a source of fascination for Western scholars—a fascination which, in the postwar decades, has blossomed into a broad effort to study comprehensively this enormous and diverse country. This intensification of interest in Russia has occurred within the context of a general explosion of scholarship on all areas of the world located outside the traditional bounds of Western Europe and the United States. The broadening of horizons has also taken place during a period of unprecedented challenges to American institutions of higher learning—a time of rapidly growing enrollments and of shifting perceptions of the proper role of education in preparing students for participation in a world full of revolutionary political, social and cultural changes. Thus, those administrators and faculty members who have responded to the challenge of expanding the range of studies to include major non-Western areas have had to surmount enormous difficulties. Nevertheless, through the dedicated efforts of many people, they have been able to marshal adequate funds and organizational resources to find or train scholar-teachers capable of teaching and writing with discernment on many of the areas concerned.

But this solved only part of the problem: there remained a serious bibliographic gap concerning world affairs prior to the post-World-War-II explosion of knowledge. Fifty years ago or, even more so, a century ago, few libraries, even those of our greatest universities, had librarians with the foresight or with the available funds to acquire on a current basis the books and journals needed as primary sources for