

Abstract

This paper discusses the two methods employed in the West to arrive at the actual totals of Soviet defense spending: the direct and the indirect method. The first tries to seize all published budgetary figures of all major expenditure clauses with particular reference to those believed to contain defense expenditures. The second calculates back to expenditures from counts of physical hardware and of other cost-bearing items of the defense establishment. Substantial references are made to the CIA's estimates as well as to W.T.Lee's work. It turns out that the two methods in important respects complement one another.

Zusammenfassung

Die Untersuchung beschäftigt sich mit den zwei prinzipiellen Methoden, die im Westen angewandt werden, um den tatsächlichen Umfang der sonstigen Verteidigungsausgaben zu errechnen. Die direkte Methode versucht über die Erfassung aller veröffentlichten Haushaltszahlen vor allem die Ausgaben herauszufiltern, die Verteidigungskosten enthalten. Die indirekte Methode basiert auf der Rückrechnung von Ausgaben, die für Rüstungsmaterial und andere Kostenträger des Verteidigungsbereiches anfallen. Eingehend werden die bekannteren (revidierten) CIA-Schätzungen sowie die Arbeiten des CIA-Kritikers W.T. Lee diskutiert. Es wird schließlich festgestellt, daß beide Methoden in wichtigen Bereichen sich ergänzen.

NATIONAL ECONOMIC PLANNING IN THE WEST: AN INTERPRETATION

Jeffrey Miller, Peter Murrell

I. Introduction

Effective debate can only proceed if the participants have a common understanding of the meaning of the terms that are used. Confusion can easily result when different interpretations are associated with a particular concept. While there is an extensive empirical and theoretical literature describing and analyzing "national economic planning" as it is practiced in Western democracies, the lack of a clear definition of national planning had made evaluation of planning experiences difficult.

Problems created by the ambiguity of the term national economic planning are evident in the debate over the value of planning. While planning is generally viewed as a means of improving communication between economic decision makers, ambiguity concerning the purpose and intent of national planning have led to the use of different criteria for measuring the success of national planning. For example, some critics of the French planning system, such as Lotz (1969), have used comparisons between plan forecast and actual economic performance as a measure of plan success. ALBIN (1971) has argued, however, that all that can be expected in an uncertain world are unbiased forecasts which lead to decisions which are in the social interest. In the debate over national planning in the United States the failure to clarify the kind of changes which the establishment of a national plan would create has made it difficult to delineate the central issues. In particular, opponents of planning charge that planning will naturally involve greater governmental control over the economy. Supporters of the planning concept dispute this, but they have not been able to provide a clear picture of what such a planning system would look like in the United

States¹⁾

In this paper we attempt to characterize national planning by analyzing the variety of approaches which have been identified with planning in Western democracies. Thus, our basic approach is a positive rather than a normative one. We characterize Western planning by identifying what sets planning apart and then we try to explain why it takes so many different forms. In section III we identify certain common characteristics which distinguish those Western countries which do plan from those which do not. Then, in section IV we delineate the differences between Western planning and the type of planning carried out in the Soviet Union. Here we draw heavily on LINDBLOM (1975) and argue that planning in Western democracies differs from Soviet-type planning because of the economic environment in which Western planning is carried out. Finally, in section V we analyze why differences in planning procedures are to be expected across Western countries. In this section we describe the limitations of a national planning program and argue that these limitations will necessarily lead to differences in emphasis depending upon the characteristics of a particular country²⁾.

1) Because of these problems, the meaning of the term "national planning" has been widely discussed as part of the debate over planning in the United States. See STEIN (1975) and LEONTIEF and STEIN (1976).

2) An underlying assumption of this study is that there is an advantage to be gained from unravelling terminological confusions. An example from the development of economic theory may be given in order to justify this assumption. For much of the early part of this century, there was a debate concerning the role of external economies in the theory of the firm and their relevance to market failure. (See BATOR (1958) for a history of the debate.) Hindsight allows us to identify confusions surrounding the use of the term "external economies" as a partial cause of the protractedness of the debate. The development of a theory of market failure proceeded more quickly once precise definitions of external economies were agreed upon. (Especially helpful was VINER'S (1931) distinction between pecuniarity and technological externalities.) Thus, terminological inadequacies can lead to the retardation of theoretical developments.

II. Survey of Existing Definitions

The principle difficulty in finding a precise definition of the term "planning" is that the term has already been used in multifarious contexts. Still, any characterization of planning should be broad enough to encompass most situations in which the word planning has been used.

The method we intend to pursue in trying to characterize Western planning might loosely be called empirical. We survey a variety of situations, both theoretical and practical, where the term "planning" has been used. Our definition is then based on the characteristics common to these situations. First, however, we examine previous attempts to provide a definition of planning. We show that existing definitions do not constitute a reasonable statement of the various theoretical and practical procedures which constitute the body of descriptions of capitalist planning. We have grouped these definitions into four categories: (1) generic definitions, (2) definitions which associate planning with governmental control, (3) definitions that identify planning with programs for future action, and (4) definitions which characterize planning as programs with specific objectives.

Generic. ELLIOT (1958) uses the term "generic" to refer to those definitions which convey one general characteristic. Thus, DAHL and LINDBLOM (1953) define planning as rational calculation and control in the use of scarce resources; CHAMBERLAIN (1965) views planning as the systematic management of assets; and ELLIOT claims that planning is the attempt to apply reason and foresight to the attainment of human purposes.

Although one would hope that these definitions are applicable to planning, they are much too broad. Double-entry bookkeeping and cost-benefit analysis are just two techniques which would fit into these generic definitions, but which are not generally regarded as planning techniques per se. As DAHL and LINDBLOM remark, their definition makes the term 'planning' superfluous³⁾. Thus, debate on planning issues

3) DAHL and LINDBLOM (1953), p. XXII.

would not be enhanced by an acceptance of the generic approach. Rationality, systematic management, and foresight cannot be regarded as the monopoly of planners.

Degree of Government Control. For those who see the USSR as the ultimate form of a planned economy, there is a natural tendency to identify planning with government control. HAYEK (1944) is the most notable proponent of this view. However, others more attuned to the idea of planning have taken essentially the same viewpoint. To LANDAUER (1947): "Planning can be defined as guidance of economic activities by a communal organ through a scheme which describes in quantitative as well as qualitative terms the productive processes that ought to be undertaken" (p.13). In more recent times, LEONTIEF (1976) indicates that "... the selection of strategically commanding points in which to apply direct influence or control..." (p.38) is an intrinsic part of planning.

If these definitions were correct, one would see a direct correlation between the existence of planning and the degree of government control of the economy. Yet a cursory analysis of Japan and Western Europe will reveal little relationship between the existence of planning and the degree of government control as conventionally measured⁴. Moreover, in general, existing planning agencies usually have no direct power nor are their plans compulsory, in a strict legal sense, even for government agencies. MASSÉ (1966), at one time France's Commissaire au Plan, has emphasized that the 'logic' of the French plan would cause economic agents to see the advantages of following the plan without any government interference. Thus, while planning is frequently used to guide governmental decision making, the existence of a plan does not necessarily mean that government will exercise greater control over the economy.

Program of Future Action. Closely connected with the preceding category are those definitions which envisage planning as a forward looking program of government action.

4) The relevant data appear in PRYOR (1973). See especially the first chapter where he analyzes the relationship between planning and other measures of government influence.

LE BRETON and HENNING (1961), and BORNSTEIN (1975) emphasize planning as having three elements: involvement with the future, a program of action, and an agency to carry out that action. Thus, they focus on government involvement in the economy. However, action, in the sense of positive government implementation after the publication of the plan, is not necessarily present in indicative planning. MEADE'S (1970) model for example, can be interpreted as one in which government does not exist except to issue invitations to a huge meeting where all economic agents can share information about their future intentions.

Programs with Specific Objectives. Some theorists focus on one particular aim of planning. Thus, HOLEŠOVSKÝ (1977) and HIRSCH (1977) focus on the delineation and pursuit of goals. TINBERGEN (1964) adds to this interpretation by specifying the mechanism which planning provides to pursue the goals: the coordination of policy. While TINBERGEN'S definition seems applicable to much of West European planning, it cannot be reconciled with MEADE'S model nor with MASSÉ'S emphasis on the 'logic of the plan.' Neither MEADE nor MASSÉ require government policy or pursuit of goals to be features of government plans.

WOLFE (1967) focuses on the plan as a published forecast. Usually plan are forecasts but many forecasts are made which are not plans. The definition is too broad. For example, a government which bought and published the forecast of a private enterprise forecaster would certainly not be classified as producing a plan.

The inadequacy of these definitions is due to one feature common to all the previous attempts to define planning: all have focused on the goals, aims, outcomes, or results of planning. Thus, the focus in the definitions is on control, action, coordination, rationality, etc., and the reasons why planning has been instituted or the resultant product of planning. Lacking in these definitions is an analysis of the events occurring after the objectives of planning are established and before the plan is produced. Thus, the procedures of planning have been ignored. Our analysis focuses

cast. If this process passed through enough steps, then an equilibrium would possibly be found. In the real world planning experiences reviewed below, not enough steps are carried out to reach an equilibrium. However, in each planning experience one can find an information exchange process which essentially is analogous to one or more steps of the equilibrium-seeking process.

Perhaps paradoxically, it is the absence of an auctioneer in actual market economies that creates the need for planning. MEADE (1970), for instance, describes a theoretical model of indicative planning where central planners take on precisely the role of the WALRASIAN auctioneer. MEADE's model is based on the general equilibrium models of ARROW (1953) and DEBREU (1959). Central planners announce a vector of prices and interest rates. Economic agents respond by describing the quantity of goods and services they are willing to exchange and the amount of capital they are willing to borrow or lend. If supply and demand are unequal in some markets, then new prices are announced by the planners and the procedure is repeated until equilibrium is achieved in all markets throughout the economy.

ALBIN's (1971) theoretical planning model is somewhat different. In his model, moving closer to a production possibility frontier creates greater risks which can be reduced if planners and economic agents exchange information. The plan is constructed on the basis of an iterative process where economic agents describe their intentions, and planners try to use this information to help agents coordinate their future activities. The analogy that ALBIN uses is the bidding process in contract bridge where partners attempt to reach a contract by using a restricted language to communicate with one another. While the model is not quite the same as the one described by MEADE, the construction of the plan still consists of an iterative procedure where information is exchanged between planners and economic agents in order to improve overall decision making.

Similar institutional arrangements can be observed in Western countries which are engaged in national planning.

on planning procedures, examining elements which the procedures of plan construction and implementation have in common, and the way that these arrangements change the channels through which information is exchanged.

III. The Planning Process

Although planning procedures in Western Europe and Japan take many different forms, there exist important common elements in these procedures which are not evident in those countries which do not plan. The establishment of a central planning agency restructures the way policy decisions are made. These planning agencies have a responsibility to improve the process of decision making. The result is the creation of a dialogue between central planners and private groups and other government agencies (which represent narrower special interests). The planning process then can be thought of as an iterative process designed to improve economic decision making by exchanging information about future intentions and programs.

In many ways the role of the central planning agency resembles the part played by the WALRASIAN auctioneer in the story describing the establishment of equilibrium prices in a perfectly competitive market economy. Indeed the iterative planning procedure is similar to the WALRASIAN tatonnement process. Decisions made by economic agents will depend on assumptions made about the decisions of other economic agents. The decision-making process in both public and private sectors can be improved by giving each agent better quality information about other agents' decisions. A formal process to accomplish this information exchange would begin with each agent submitting to a central planning board information concerning the decisions they would make when they have no information about other agents' actions. Then the central planning board would circulate to all economic agents a forecast based on the information received. The agents would then submit revised information about their decisions, the revision being caused by the new information contained in the forecast given to them by the central planning board. The central planning board would then issue a revised fore-

these agents it based on a projection, constructed by planners, which includes some information about future public sector behavior. Thus, the French planning procedure can be looked upon as the first step in an iterative process designed to produce a forecast of a future economic equilibrium. It is this process which sets planning in France apart from the procedures for construction of economic policy which have been adopted in countries which do not formally plan.

The Japanese plan is basically formed through an interaction between the Economic Planning Agency (EPA) and government and business leaders⁷⁾. The EPA makes projections using its own models of the economy and information supplied by government and business. The models are used to construct consistent forecasts. These projections are then sent to the Economic Deliberation Committee (EDC). The EDC, which is dominated by businessmen, then chooses a forecast which is contained in a final report submitted to the government for approval.

Once the plan is complete, there is no government commitment to implement the plan. (In fact, there have been occasions when planners have had to estimate future government policy because some ministers refuse to divulge information.) The forecast therefore supplies information from private and public economic agents to each other. The two-way information exchange can be looked upon as the first step of an equilibrium-seeking process.

The Dutch have placed a much heavier emphasis on econometric modeling as part of plan construction than have the French or the Japanese. The econometric forecasts are supplemented with information supplied by government ministries and, through their role in the Social and Economic Council, the private sector.

The Dutch planning process begins with the Central Planning Board which constructs a plan forecast based on assumptions

7) The following description of the Japanese plan is drawn from KOMIYA {1975}, BIEDA {1970, 1974} and SHISHIDO {1965}.

Analysis of the planning processes in four important Western countries - France, Japan, the Netherlands, and Sweden - lends support to the claim that these iterative procedures are indeed common to all indicative planning systems⁵⁾.

In France representatives from the private sector play an important role in plan construction through their positions on the Economic and Social Council and the Modernization Commissions. It is through the work of Modernization Commissions that detailed industrial forecasts are made. The Commissions, whose members include government officials as well as representatives of business and labour groups, are of two types. The vertical Commissions are concerned with a specific area of general interest such as manpower, scientific research, regional planning, etc. The Commissions are first given the macroeconomic projection constructed by the planners and are then asked to construct branch forecasts by first investigating future developments in their particular area. The Commissions then consult with one another in an attempt to build an overall forecast which is internally consistent. Because of time and cost constraints, the process does not go through sufficient iterations to achieve complete convergence. However, the individual sectoral forecasts do benefit from the information provided by the Commissions studying related industries (LUTZ, {1969}).

The product of these efforts is a projection describing the French economy in the last (fifth) year of the plan. What distinguishes the French plan from forecasts done in countries that do not plan is the method used to construct the forecast. Rather than simply producing an econometric forecast, the French plan is based on information supplied by economic agents⁶⁾. In turn, the information supplied by

5) The descriptions which follow have been kept brief in order to avoid repeating material which is contained in many easily available sources. We have focused solely on the properties of the planning schemes which are relevant to our argument.

6) The French have also incorporated statistical techniques into the planning process. For a description of the role that FIFI, a model of the French economy, plays in the planning process, see COURBIS {1972}.

and production plans.

Although real world planning experiences do not proceed through enough iterations to find an equilibrium path, like the paths described in the theoretical models, it is an equilibriumseeking process which provides economic agents with more information about future economic developments.

IV. Environment

The characterization of planning as a process of iterative information exchange could also be applied to Soviet-type planning. Plan construction procedures in Western and Soviet-type planning have a similar basis. In order to distinguish Western planning from Soviet-type planning, one must examine the effect of environmental differences on the role of planning within the economy.

In opening his theoretical discussion of Western planning, MEADE (1970) describes the type of economy where such planning might occur, as "developed, industrialized, essentially free enterprise, but with a considerable element of State activity and intervention of one kind or another" (p.1). It is, therefore, an economy where resources are allocated principally by market forces, where government still plays an important stabilization and in some cases allocative function. The nature and extent of governmental activity will vary greatly depending upon cultural and philosophical differences.

Since output decisions are based principally upon market forces, LINDBLÖM's (1975) term, "preference guided" economy (rather than, "intellectually guided") seems applicable in this case. In a preference guided society there is a belief that policymakers are limited in their ability to make rational choices. Outcomes are decided by the interaction between agents. In developing new policies, the emphasis is not on choosing an optimal course of action but rather the development of new institutions which alter the way in which agents in the economy will interact with each other. In an intellectually guided society it is believed that choices can be made in rational way and resources can be allocated

about government policy which are derived from examining previous government policy⁸). These forecasts are then sent to government ministries for comment. A new forecast is then made on the basis of this information. The final report from the Central Planning Board may include alternative forecasts as well as recommendations for various policy actions. The plan is then issued by the government.

Like plans in other Western countries, the plan is designed to provide a clearer picture of future economic development. No government department is forced to follow it. By providing more information both from the private sector and from other policymakers, it is hoped that the plan will enable policymakers to coordinate their decisions.

In Sweden the national plan (or national budget as it is called) is constructed on the basis of discussions between planners, government officials, and representatives from the private sector. In this interaction, the planners will gain knowledge about possible future developments in such areas as technological change, government policy, etc. This information is then integrated into econometric forecasts. The projections then form the basis for further discussions with representatives from both the private and public sectors. The final forecast is then issued by the government as an economic report. The forecast is not considered to be binding by either government agencies or economic agents in the private sector⁹.

The process of national planning in theoretical models and actual planning experience is similar. In each case, the distinguishing feature of national planning is the establishment of a central planning agency which carries out an iterative procedure in which representatives from a broad spectrum of the economy interact with central planners to formulate a plan designed to improve economic decision making. While the plans are nonbinding, they produce forecasts intended to assist economic agents in making policy decisions

⁸ The description of Dutch planning comes from ABBERT (1969) and DROR (1963).

⁹ See LINDBECK (1965).

corrective action. In the sixth plan, the FIFI econometric model was designed to clarify strategic choices rather than produce specific targets (COHEN, {1977}).

The common trait of all the theoretical and practical examples of national planning in preference-guided mixed economies is the establishment of a set of procedures which attempt to improve the interaction between both private and public agents. In contrast, the main focus of planning in Soviet-type economies is the choice of a particular path of development and the formulation of commands designed to ensure that the economy follows this path.

V. The Scope of Planning

In this section, we examine the relation between planning and its environment: what is the scope and orientation of planning exercises? As soon as one tries to answer this question by an examination of theoretical and practical planning procedures an apparent paradox arises. We think of national economic planning or central planning as names indicating economy-wide orientation. However, many planning procedures seem to be narrow in focus, concentrating on a specific area of concern. This combination of specificity and generality is difficult to reconcile unless one examines in more detail the reasons why such a combination might occur.

The economy-wide focus of planning can be seen most clearly in theoretical models and is also evident in the institutional arrangements of planning procedures¹¹. Nations which plan establish a separate agency for planning¹². The planners' tasks have been solely oriented towards the plan. On the surface it would appear that the planning institutions are not designed to be used solely as tools for one particular aspect of government action. Yet, even a cursory glance at the history of planning is enough to show that the institutional neutrality of planning procedures is not carried into the

¹¹ See for example MEADE (1970) or TINBERGEN (1964).

¹² See ABERT (1969) on the Netherlands or COHEN (1969) on France for example.

optimally by choosing an appropriate course of action. The type of planning done in these two societies differs. For want of a better name LINDBLOM calls the type of planning carried out in an intellectually guided society "conventional planning." Planning in a preference guided society is not an attempt to "plan the solution to a problem but instead ... the development of a capacity to invent a solution tailored to the particular form in which the problem eventually appears" (p.42). The term LINDBLOM uses to describe this kind of activity is "strategic planning." Thus, while the objectives to be sought after may be spelled out in a concrete way (i.e., 4% unemployment, 2% inflation, etc.), attempts to attain these goals in a preference guided society would take the form of alteration of arrangements for social interaction rather than trying directly to achieve these objectives.

National economic planning in the West is, therefore, one example of strategic planning. Instead of trying to direct the economy along a specific rationally chosen path as in conventional planning, the function of national planning in a preference guided economy is to improve the framework of institutions within which the interaction of agents create economic outcomes. Since these are mixed economies, this means better coordination between policymakers within government, between economic agents in the private sector, and between the private and public sectors¹⁰. This coordination will be provided by the iterative information exchange between economic agents.

Developments within French planning procedures provide examples of the strategic orientation of Western planning. While the establishment of output targets has been an important part of French plan construction, more recent plans have outlined contingent strategies that are to be followed if special circumstances arise. For example, the fifth plan specified the levels of certain variables (unemployment rate, trade deficit etc.) at which the government would consider

¹⁰ See MONTIAS (1976), pp. 177-180 for a definition of coordination.

Cost factors relevant in orienting the plan towards a certain activity would be, for example, the cost of obtaining information about that activity and the reliability of that information. Criteria relevant to the calculation of the benefit of including an activity in the plan would be the significance of the contribution of that activity to overall economic welfare or the relevance of that activity to a particularly pressing problem. Analysis of these factors would be one of the first tasks that any planners face in a planning process.

The notion of comprehensiveness is important in defining the meaning of planning because this notion reminds one that planning is not inherently directed at any one form of activity. Rather the emphasis in national economic planning is itself derived from those preferences, technological characteristics, and institutional constraints which affect the development of any particular economy.

Given the foregoing analysis, it is easy to explain the various emphases observed in planning procedures. Theoretical models will seem to be broader in outlook than actual planning attempts because these models usually do not incorporate costs of information gathering. The Dutch emphasis on the influence on their international competitiveness of wage increases surely results from the major concern of a small, open economy with few natural resources. The Japanese plan's orientation in the 1970s towards welfare issues reflects a growing concern over the costs of its successful growth effort. Similarly, the emphasis of other planning procedures could be explained. These explanations allow us to see planning, not as a vastly different procedure in different countries, but instead as a procedure which reacts to the special needs of each country.

VI. Conclusion

As HAYEK {1944} points out, the market system is a very efficient mechanism for relaying information between agents about "the particular circumstances of time and place" so that economic activity can be better coordinated. In many ways, however, the information provided through existing

produced plans. Most plans have had their emphases and these emphases have varied between countries and over time within countries. For example, earlier Japanese plans focused on the aggregate growth rate while a more recent plan focused on welfare aspects of development¹³; Dutch plans have focused on foreign trade and particularly the interrelation between wage inflation and foreign trade competitiveness; French plans have paid increasing attention to price levels and foreign trade relationships in later years while in earlier years gave more attention to the structure of industrial growth¹⁴.

In establishing a precise characterization of planning, one must reconcile the apparent paradox. How can planning be considered national yet be so focused? The reconciliation arises from observing that planning is a costly process. Therefore, planning procedures will be limited in their scope by budgetary restrictions. Once there are such limitations, there will be a need to discuss the orientation of planning because benefits will vary according to the way in which resources are allocated in the planning process. The particular orientation which the process takes will be a result of the planning process rather than a constraint on that process. Thus, planning has a characteristic which we will call *comprehensiveness*.

The notion of comprehensiveness implies that there is no *a priori* assumption that any particular set of economic activities will receive special attention in the plan. Rather, the decision to place emphasis on a particular set of economic activities would be of a cost-benefit type. The cost-benefit analysis would almost certainly be a heuristic one for the reason that the calculation of benefits derived from procuring information would involve the procurement of the information itself, thus making the cost-benefit calculation moot¹⁵.

13) See the report published by the Government of Japan on the 1973-77 Plan {1973}.

14) See ABERT {1969} for a discussion of the emphases in Dutch planning.

15) This is a problem which RADNER {1968} has referred to as "infinite regression."

Equally important, perhaps, is that these new developments may permit different types of information to be processed. At present most real world plans provide some kind of forecast of future economic activity with some limited concessions to future uncertainty. This information changes the decision-making environment but, at present, the information provided differs little from the kind of information provided in Soviet-type plans. In a preference guided society where future uncertainties and changing preferences frequently alter the path of economic growth, plans should make explicit recognition of an uncertain future environment. For example, such recognition might be accomplished by publishing a spectrum of plans, each plan constructed under a different set of assumptions regarding future preferences and environmental development. As the relative cost of information processing declines, the net payoff from such planning will rise. Thus, as the technology changes, we can expect that planning will evolve into many new forms.

Unless planners have a clear conception of the benefits which planning can provide, the development of the planning process will not be smooth. Some changes which may at first appear promising may later prove unsuccessful. The development of computer technology and econometric modeling skills have tended to change the planning process. For example, in France, the recent plans have relied much more on modeling than on the modernization commissions which have declined both absolutely and relatively in importance.

During the preparation of the sixth plan, the sophistication of the econometric forecast overwhelmed many of the participants in the planning process (Liggins, {1975}). The danger of the new technology then is that in its sophistication it may reduce the extent to which planning is a genuine exchange of information between economic agents. Thus, the value of planning to a society may be reduced. If, however, planners grasp that the information exchange is the essence of planning—rather than the production of a set of fixed targets—then the new technology can be used to enhance the value of planning in the future.

markets is not sufficient¹⁶). Planning in Western democracies can thus be seen as an attempt to improve coordination of economic decision making by expanding the information channels to allow agents to communicate more fully with one another.

In a preference guided society planning institutions are not designed to construct a rationally chosen path for the economy to follow. Rather the forecasts which are frequently associated with planning are useful principally because they provide additional information for economic agents to use in making decisions. The procedures are iterative to give agents the opportunity to react to the new information which is now available and to indicate to others how this will affect their decisions. Because it is costly to establish and maintain these channels, their use is limited and the scope of planning is necessarily restricted.

Since planning is so severely restrained by these cost considerations, changes in informational processing costs could bring about important changes in both the kind of goals which planning attempts to achieve and the type of information which is communicated. This can be seen in the evolutionary development of the French planning system. In the early plans the principle concern was the modernization of the central industrial core of the economy. As confidence grew, more elaborate planning institutions were established. With the development of the modernization commissions input into the plan was sought from a wide spectrum of economic agents and the objectives of the plan were broadened until eventually the plan was redesigned so as to improve overall resource allocation in the economy. New technical apparatus was brought into play. Econometric forecasting techniques were introduced to improve the economic projection. These changes were in part due to the fact that with lower costs more information could be processed allowing planners to set broader goals. As technologies continue to improve, we can anticipate further developments in this area.

¹⁶ For a discussion of these issues, see WILLIAMSON {1975}.

- Government of Japan, Economic Planning Agency, *Basic Economic and Social Plan - Toward a Vigorous Welfare Society -1973-77*, Tokyo, 1973.
- HAYEK, Friedrich A., *The Road to Serfdom*, Chicago: University of Chicago Press, 1944.
- HAYEK, Friedrich A., "The Use of Knowledge in Society," *American Economic Review*, Vol. 35, No. 4, September 1945: 519-30.
- HIRSCH, W.Z., *Recent Experiences with National Planning in the United Kingdom*. A Study prepared for the Joint Economic Committee, U.S. Congress, 95th Congress, 1st Session.
- HOLEŠOVSKÝ, V., *Economic Systems: Analysis and Comparison*, New York: McGraw-Hill, 1977.
- KOMIYA, R., "Planning in Japan," in: M. BORNSTEIN (ed.), *Economic Planning, East and West*. Cambridge, Mass.: J.B. Lippencott, 1975.
- LANDAUER, C., *Theory of National Economic Planning*, Berkeley: University of California Press, 1947.
- LEBRETON, P.P. and HENNING, D.A., *Planning Theory*, Englewood Cliffs, N.J.: Prentice-Hall, 1961.
- LEONTIEF, W., "National Economic Planning Methods and Problems", in: LEONTIEF W. and STEIN H., *The Economic System in an Age of Discontinuity*. New York: New York University Press, 1976.
- LIGGINS, D., *National Economics Planning in France*, Lexington, Mass.: Heath, 1975.
- LINDBECK, *Swedish Economic Policy*, Berkeley: University of California Press, 1974.
- LINDBLOM, C.E., "The Sociology of Planning: Thought and Social Interaction", in: M. BORNSTEIN (ed.) *Economic Planning, East and West*, Cambridge, Mass.: J.B. Lippencott, 1975.
- LUTZ, V., *Central Planning for the Market Economy: An Analysis of the French Theory and Experience*, London: Longmans, 1969.
- MASSÉ, P., "French Methods of Planning", in: M. BORNSTEIN, *Comparative Economic Systems: Models and Cases*, Homewood, Illinois: Richard D. Irwin, 1965.
- ABERT, J.G., *Economic Policy and Planning in the Netherlands, 1950-65*, Yale University Press: New Haven 1969.
- ALBIN, P., "Uncertainty, Information Exchange and the Theory of Indicative Planning." *Economic Journal* 81 (March 1971): 61-90.
- ARROW, K.J., "The Role of Securities in the Optimal Allocation of Risk-Bearing," *Review of Economic Studies* 31, (1963-64): 91-96.
- English translation of "Le rôle des valeurs boursières pour la répartition la meilleure des risques." *Econométrie*, Colloques Internationaux du Centre National de la Recherche Scientifique, 11, (1953): 41-47.
- BAFOR, F., "The Anatomy of Market Failure," *Quarterly Journal of Economics*, August 1958: 351-379.
- BIEDA, K., *The Structure of the Japanese Economy*, Sydney: Wiley, 1970.
- BIEDA, K., "Economic Planning in Japan," in: SIMONIS, H. and SIMONIS, V.E. (eds.), *Japan: Economic and Social Studies in Development*, Institute of Asian Affairs: Hamburg, 1974.
- BORNSTEIN, M., *Economic Planning: East and West*, Cambridge, Mass.: Lippincott, 1975.
- CHAMBERLAIN, M., *Private and Public Planning*, New York: McGraw-Hill, 1965.
- COHEN, S., *Modern Capitalist Planning: The French Model*, Cambridge: Harvard University Press, 1977.
- COURBIS, R., "The Fifi Model Used in the Preparation of the French Plan", *Economics of Planning* 12, (No.1:2, 1972): 37-78.
- DAHL, R.A. and LINDBLOM, C.E., *Politics, Economics, and Welfare*, New York: Harper, 1953.
- DEBREU, G., *The Theory of Value*, New York: Wiley, Inc., 1959.
- DROR, V., *National Planning in the Netherlands*, Syracuse: Syracuse University, 1963.
- ELLIOTT, J.E., "Economic Planning Reconsidered," *Quarterly Journal of Economics*, February 1958: 55-76.

J. MILLER, P. MURRELL

Zusammenfassung

Volkswirtschaftliche Planung kann in den westlichen Ländern als der Versuch angesehen werden, die Koordination wirtschaftlicher Entscheidungen durch die Vergrößerung der Informationskanäle zu verbessern. Die Studie versucht die verschiedenen Ansätze zu analysieren, die in den einzelnen westlichen Demokratien für die gesamtwirtschaftliche Planung kennzeichnend sind. Zudem werden die Unterschiede zwischen westlicher Planung und der Art von Planung herausgearbeitet, wie sie in der Sowjetunion betrieben wird. Im letzten Kapitel gehen die Autoren der Frage nach, warum Unterschiede in Ausmaß und Art der Planung zwischen den westlichen Ländern erwartet werden müssen.

Abstract

Planning in Western countries can be seen as an attempt to improve coordination of economic decision making by expanding the information channels. This paper tries to analyze the variety of approaches which have been identified with planning in Western democracies. Also, the differences between Western planning and the type of planning carried out in the Soviet Union are delineated. In the last chapter the authors analyze why differences in planning procedures are to be expected across Western countries.

- MEADE, J.E., *The Theory of Indicative Planning*, Manchester: Manchester University Press, 1970.
- MONTIAS, J.M., *The Structure of Economic Systems*, New Haven: Yale University Press, 1976.
- PRYOR, F., *Property and Industrial Organization in Communist and Capitalist Nations*, Bloomington: Indiana University Press, 1973.
- RADNER, R., "Competitive Equilibrium Under Uncertainty", *Econometrica*, Jan. 1968: 31-58.
- SHISHIDO, S., "Japanese Experience with Long-Term Planning", in: HICKMAN, B.G., *Quantitative Planning of Economic Policy*, Washington, D.C.: Brookings, 1965.
- STEIN, H., *Economic Planning and the Improvement of Economic Policy*, Washington, D.C.: American Enterprise Institute, 1975.
- SVENNILSON, "Planning in a Market Economy", *Weltwirtschaftliches Archiv*, 1965: 184-201.
- TINBERGEN, J., *Central Planning*, New Haven: Yale University Press, 1964.
- VINER, J., "Cost Curves and Supply Curves", *Zeitschrift für Nationalökonomie*, September 1931.
- WILLIAMSON, O., *Markets and Hierarchies: Analysis and Antitrust Implications*, New York: Free Press, 1975.
- WOLFE, J.N., "Planning by Forecast", in: D.C. HAGUE (ed.), *Price Formation in Various Economies*, London: St. Martin's Press, 1967.