Problems of planning economic policy

Jan Tinbergen*

Economic policy itself must be planned

The word ‘planning’ is often used to denote the technical elaboration of the means needed for the implementation of a policy which is considered as already given. This use of the word, however, obscures an important element in the concept of planning: far from being given a priori, an economic policy needs itself to be planned or, shall we say, designed. Some of the principal problems connected with this ‘design’ will be the main subject of this article. Nevertheless, it seems appropriate first to remind the reader of a few concepts that must play a part in any such discussion.

By an economic policy we mean the economic aspect of all government activity with the exception of activities undertaken by government agencies or government-owned enterprises in their capacity as consumers or producers. There may be some doubt as to where exactly to draw the borderline, but the borderline activities will not, in any case, be among the most important elements of policy. Defined positively then, acts of economic policy are aimed at influencing the economic process as it is carried out by others.

Most countries have governments at different levels, e.g. local, county, state and federal – or whatever other official names are used to designate these governments; and we have the beginnings of policy-making at the international and supranational levels. Accordingly one may speak of the number of policy-makers involved in the policy of a certain country or group of countries. Our discussion will refer for the most part to the economic policy of central national governments, although occasionally the policies of other agencies will be mentioned. Sometimes it is also useful to consider certain private organizations as policy-makers, e.g. trade unions, employers’ (including farmers’) unions and even big concerns – all these can perhaps best be described as pressure groups. Indeed, when we speak of the central government’s policy, we should not forget that it is a fiction – although a useful one for most of our purposes – to say that the central government represents one single policy-maker. In fact, it consists of a fairly large number of policy-makers, who do not always achieve the unity of action that is desirable.

The best approach to the systematic description of an economic policy is in terms of aims and means. As far as possible the various component elements in each of these should be singled out. The problem of the design of an economic policy might be formulated as follows: the aims are given, but the means are, qualitatively and quantitatively, the unknowns of the problem. Several examples will be given later in this discussion. And although the aims are given, they may already imply a further problem, if they are mutually contradictory.

The design of an economic policy will depend, especially as concerns the amount of work involved, on the range of the aims and means. By range we mean the number of aims; clearly the range of aims will influence the range of means needed. A policy of complete laissez-faire if it existed, would have a
range of zero. We might take as the other extreme the policy of a completely regulated war economy.

The process of designing economic policy is carried out by various institutions. As a rule government institutions have the decisive and final influence on the shaping of any policy, but often preparatory work has been done elsewhere, in particular within political parties and scientific institutions. Both these types of institution today take an active interest in the formulation of economic policies. We shall discuss the designing process as a government activity, but it should not be overlooked that, in fact, the process may be carried out jointly by governments and such institutions.

The designing process should be viewed as a continuous one, producing new decisions at more or less regular intervals, and continuously revising earlier ones in the light of new facts and new insights.

Policies, and hence also economic policies, are often based on pre-conceived somewhat doctrinaire ideas. This is inevitable since no one can lay claim to a complete understanding and a full knowledge of all the processes involved. But the views of governments and the experts on the subject may diverge to varying degrees (not to mention divergences of opinion between one expert and another!).

We shall therefore discuss the process of the design of economic policy; first from the scientists’ point of view as to what the process might be ideally and what are some of the most important ‘open questions’. Then, some of the ‘imperfections’ of design in practice – again from the scientist’s point of view – will be set out. Finally, a section will be devoted to the similarities and differences between methods of design in countries with different social systems.

In presenting the problem in this way it is not our intention to suggest that scientists alone could solve the problem of the design of economic policy. This would be an overestimation of their role. Their part in shaping an actual policy is limited to making a first suggestion, and this, even when it is made by the best scientists, will always require the critical analysis of the ‘wise men’ – who are now almost a recognized institution in policy-making. But since the scientists’ contribution to the process is to clarify facts and relationships our presentation is justified.

Decisions needed in an ‘ideal’ design of economic policy

We shall attempt here to make a systematic and ‘complete’ analysis from the scientist’s point of view, of the steps involved and the relationships to be respected in the design of an economic policy. The word ‘complete’ should not be taken literally – it merely indicates that no important elements have been omitted.

The first set of decisions to be made concerns the formulation of the aims. Generally speaking the aims can be subdivided into individual and social aims, and material and immaterial aims. Taken together the aims are assumed to represent the maximum attainable ‘happiness’ – or as it is often referred to, ‘welfare’. This implies a number of choices with regard to the relative weights to be given to each of the aims at a given moment and in the nearer and the more remote future.

The most important categories of aims may be listed as follows according to the subdivision given above:

Material and individual aim: consumption of goods.
Material and social aim: equitable distribution.
Immaterial and individual aims: cultural opportunities; status.
Immaterial and social aims: justice; freedom.

The categories ‘individual’ and ‘social’ indicate that each individual’s happiness depends both on what he gets personally and on his relationship with others; with regard to material goods we may say that both the average level of consumption and distribution among individuals are important. Among the immaterial goods, justice and freedom more usually refer to relations between people and to cultural opportunities (including learning opportunities) and status refers to the individual, although not exclusively. The aims are to reach as favourable as possible a combination of each of the elements listed, given the limitations imposed by the laws of production and the psychological
laws governing social behaviour. It is owing to these limitations that from a certain point on, we can produce more goods only by sacrificing some of the other elements, and arrive at a more equitable distribution by giving up certain other elements of the aim. The choice between achieving the aim in the nearer or in the more remote future is a most important one; we can have more goods in the future if we save now.

In each concrete situation, say at the time of preparing the government budget for the following year, the aims can be made more precise by forecasting the situation to be expected with regard to each of the aims for the year to come and for some years hence. Such a forecast will often take the form of a set of figures for national income, its distribution, employment, price level, and a set of facts about rules and institutions, and on such questions as admission to schools, working hours, etc. The policymaker can then use his judgement to decide which aspects of the situation require improvement first. Thus a list may be drawn up of the most desirable changes, and their nature and extent described. This may take the form of a government declaration of intent.

The set of aims in either the more general form first discussed or the more concrete and restricted form just mentioned will now have to be confronted with the various means available for the attainment of the aims. These means may conveniently be described as related: (a) to the economic order; (b) to the structure of the economy and its development; and (c) to short-term action for adaptation or ‘steering’ in reaction to such rapid changes as crop fluctuations, world market price movements and so on. The first group cannot easily be changed, whereas the third is of a more superficial character and relatively easy to revise. The second category is of an intermediary type. The following list illustrates the nature of these various means:

1. Relating to the economic order: size of public sector; tax system and system of social insurance; nature of wage regulations and systems; nature and extent of industrial democracy; degree of centralization of administration; degree of centralization of production; structure of markets and pricing.

2. Relating to the economy’s structure and its growth: level of investment, material and immaterial.

3. Relating to short-term adaptation to changes in conditions: level of various taxes; level of public expenditure; credit policy; level of wages.

As already explained, we have not attempted to give a fully detailed treatment. It will be observed that the factors under (1) are often qualitative, whereas (2) and (3) are rather of a quantitative character. Changes in (1) may be called reforms (if they occur suddenly, even revolutions), while changes in (2) have sometimes been called quantitative policy; the means in this group are also called ‘instruments’. The decisions to be taken – and which form the basis of the design of economic policy – are occasional changes in (1) and rather frequent changes in (3), while changes in (2) may be less frequent. On each occasion the changes should be such as to maximize the economy’s welfare, of which the various aims are all component parts. These decisions will have to rest on some form of knowledge about the influence that can be exerted, by changes in means, on the quality or quantities of the ‘aim phenomena’.

This will include knowledge of economic and, more generally, sociological ‘laws’ and a large variety of extra-economic ‘data’ – concerning the technical processes available, the world market, and so on. In principle the problem of taking these decisions presents many simultaneous unknowns and is a rather formidable one. In practice, and even in theory, it can only partly be treated in a consciously explicit way; a good deal of intuitive simplification or guesswork will be necessary. Rightly or wrongly, as a rule the problem is analysed and solutions are based on separate decisions with regard to the main categories of means. In the most explicit treatments of the problem the economic and, to some extent, the sociological ‘laws’ are given the form of ‘models’ and the decisions – at least the first suggestions concerning such decisions – are made with a view to the maximum achievement of the aim.

Three different types of model corresponding to the three component problems are the basis for a scientific approach to our design.
The problem of the optimum order has been tackled, along qualitative lines, with the aid of the models of welfare economics; the problem of development with the aid of development models; and the problem of short-term adaptations with the aid of short-term dynamic models of a quantitative character.

Some remarks should be added about the nature of this ‘problem of maximization’. Although the true problem is the maximization of social welfare over time, our knowledge of the laws and facts involved is so slight that, more often than not, we are forced to simplify here also. In the case of short-term adaptations it will often be assumed that some combination of predetermined quantitative ‘targets’ coincides with the maximum, e.g. full employment, an equilibrated balance of payments (meaning no change in the country’s gold stock), a stable price level, an unchanged distribution of income, and a level of investment equal to a certain percentage of national income. The means of economic policy are then so determined – if this proves to be possible – that this set of fixed targets is reached. By so doing one disregards the possibility that the targets set may influence social welfare or that a change in some aspect of the economic order may lead to higher social welfare. In designing the development pattern of a country a basic decision concerns the rate of growth preferred. As is well known, the rate preferred in communist countries is much higher than in non-communist ones. It can hardly be maintained that either of these choices has been based on an explicit attempt to maximize welfare over time.

In formulating this problem of maximization in a given economic order the necessary conditions for maximum social welfare are decided upon. The question then arises whether these maximum conditions can be met by certain institutions. In this connexion it has been proved, for example, that under certain conditions, free competition and free markets are institutions which satisfy some of the maximum conditions, e.g. equality of marginal utility obtained by spending the last shilling on various products. However, other conditions are not satisfied by these institutions.

Summing up the present state of our knowledge, we must conclude that the best we can do, even in an ‘ideal’ design of economic policy, is to ‘design in stages’. Corresponding to the subdivision of the means of economic policy, more or less separate sets of decisions might be taken with regard to (1) the economic order and changes in it; (2) the pace of development and the future structure of production; and (3) short-term adaptations to the continuous disturbances of equilibrium resulting from changes in crops, in world market conditions, in consumer tastes and technological possibilities. The frequency of decisions (1) could be low and the preparation long; decisions (2) and still more (3) will have to be increasingly more numerous; those of type (3) may have to be taken each quarter and those of type (2) each year.

Open questions in the design of economic policy

In the outline of a theory of the design of economic policy given in ‘Decisions needed in an “ideal” design of economic policy’ (p. 336 above), we have involuntarily omitted reference to a number of open questions which reduce the possibility of arriving at such an ‘ideal procedure’. These open questions reflect two kinds of imperfection; those in our theoretical approach and those in our factual knowledge. In consequence, subjective rather than objective solutions will have to be used. These may not be the ‘best’ solutions and they imply the occurrence of conflicting views and struggle both within and outside the designing agencies.

In order to approach the description of these imperfections logically we shall describe them according to their impact on the main sets of decisions suggested in ‘Decisions needed in an “ideal” design of economic policy’, i.e. according to whether they influence the choice of the economic order, of the rate of development and the structure of the economy, or of short-term adaptations. Needless to say they may influence more than one of these, thus the logic of this subdivision is not unassailable.

It is not surprising that the imperfections in our theoretical and factual knowledge are most baffling in connexion with the choice of the economic order. The basic imperfection is our inability to compare the satisfaction or happiness of different individuals. As long as we are unable to make this comparison, the concept
Problems of planning economic policy

itself of social welfare has to remain ill-defined in many situations. Suppose we consider the possibility of spending more money on the education of unskilled workers, thus raising their income to the detriment of other groups – by reinforcing the bargaining power of the unskilled. If, then, we are unable to say whether an increase in A’s income and an equal decrease in B’s income does or does not increase social welfare, we cannot decide what to do. In a large number of decisions in one form or another this problem turns up.

As long as we cannot make this comparison in a more or less objective way there will remain margins of uncertainty in our decisions.

Another serious imperfection is our lack of knowledge about the distribution of abilities among individuals. Whereas in the last twenty years or so the abilities required for a large number of jobs – mainly manual and simple ‘white collar’ labour – have been carefully listed and measured, we have no real knowledge as to whether the population possesses these abilities or not. Still less are we informed about the possibilities of improving these abilities by training. Hence the optimum level of education facilities and the optimum distribution of income can be assessed only very tentatively.

A third imperfection is our inadequate knowledge of utility or satisfaction indifference curves or surfaces for representative groups of individuals. In less theoretical terms, our knowledge of the reaction of the individual to incentives – and to such matters as income and estate taxes and private ownership – is very restricted. This influences to a very large extent our answers as to what tax structure and property structure are optimal.

A fourth series of gaps in our knowledge, a less serious defect, concerns the costs of infrastructure and its external effects on production. By infrastructure, the development economist means a set of basic investments in roads, dwellings, schools, etc., and perhaps in the supply of energy. Some of these technical data are important for the determination of the optimum size of the public sector as well as for the choice of the optimum pricing systems.

Turning to the imperfections in our knowledge relevant to the choice of the pattern of development, a great many technical data on the cost of production for various industries in each country, now and later, must first be quoted. The collection of these data is being undertaken on an increasingly large scale. Nor, as regards theory do we know what exactly constitutes ‘maximization over time’ of our welfare. Over an infinite time, without any discounting of the future? Or over shorter periods, so as to avoid too great a sacrifice of the present generation?

Certain less serious imperfections in our knowledge relating to short-term adaptations concern the attitudes of investors and consumers with regard to investment in durable as well as semi-durable commodities, and current developments in their financial holdings.

Owing to these deficiencies in our knowledge the actual process of designing economic policy can, only to a modest degree, be based on scientific methods and data, although the use of scientific assistance is rapidly increasing. The imperfections mentioned might, indeed, be considered as a programme for research which would strengthen a more objective approach to problems which have created bitter divisions and even, to some extent, are at the bottom of our present-day world schism.

Imperfections in the actual design of economic policy

The actual design of an economic policy requires more than scientific analysis: it demands an understanding of the general political situation in a country and knowledge of a number of details which are rarely taken into account in giving scientific advice about economic policy. Thus the ideal process of design and the process as it is carried out in practice will therefore show different advantages. Practice in one way or another solves the problems mentioned above, and in that respect is better than theory; theory, on the other hand, solves more precisely or more systematically some of the fundamental problems involved and as a rule is better than practice in that respect. Let us now discuss some imperfections in the actual process as seen by the theorist. These may be eliminated in the future development of policy, since all human activity passes from phases in which it is carried out unconsciously to phases
where its purpose is better understood as a result of careful thought.

Of course, what has been termed an ‘ideal’ procedure, in ‘Decisions needed in an “ideal” design of economic policy’, is to some extent already a reality. Among the decisions relating to the three categories of means, those concerning short-term adaptations have fairly frequently been based on some more precise knowledge of theoretical methods and models; those concerning development less frequently and those concerning the economic order almost never. This is not surprising; it is easier to establish models for a restricted and quantitative purpose than for a broad and purely qualitative purpose. Scientific analysis of qualitative problems has produced much less precise models and necessarily more theoretical, known as the theory of welfare economics. But progress is being made on all three fronts.

In illustration of this general statement may we give examples from our own experience merely because we know them best, and not because we believe them to represent the nearest approach to the ‘ideal’ method.

The annual publication of the Dutch Central Planning Bureau, a government office in charge of making an annual forecast of the economic situation of the Netherlands and estimates of the influence that may be exerted by the use of some of the means of economic policy is one example. The forecast gives a numerical description of the levels of activity and the expected price levels for the year to come and of a number of other important economic phenomena. The forecast is based on a number of explicit assumptions regarding world market developments, increases in population and productivity, planned government expenditure and sometimes on an inquiry into private investment plans (or an estimate of these based on an econometric relationship). A separate chapter deals with the influence to be expected from various conceivable changes in the instruments of economic policy (tax, wage or rent levels, expenditure or new schemes of social insurance). The figures are derived from an econometric model, and have the advantage of assisting the reader to determine the consequences (including variations in the extent of the changes) of any combinations of policy measures he might wish to suggest which might bring the forecast closer to a more desirable situation which he considers can be brought about.

The same agency has produced other examples in submitting to parliament proposals for changing the structure of the economy, i.e. when unemployment insurance and old-age pensions were added to the system of social insurance. Another example is the long-term forecast for 1970 prepared by the Bureau.

Similar examples from other democratic countries might be cited, in particular from Norway, the United Kingdom, the United States of America, Sweden and Denmark, although less use seems to have been made of explicit econometric models.

Very impressive estimates with regard to the development of their economies have been presented by the governments of communist countries ever since the First Five-year Plan of the USSR was published. The main characteristic of these plans is their detailed breakdown of total production. Since they describe the economy as a whole, they also give information regarding the level of taxes, State expenditure for administrative purposes, wages, etc. By their nature they do not include the short-term adaptations needed to face unexpected situations, such as exceptional crops; no five-year plan could do so.

Development plans of a similar nature, though less detailed, have also been published by a number of underdeveloped countries outside the communist sphere of influence, for example in India, Pakistan and certain Latin-American countries.

The examples given thus far have in common the attempt to base decisions on the simultaneous consideration of some of the means.

There are of course considerable differences in range and quality between economic policies in different countries. As a result of doctrinaire views, some countries adopt a policy which allows only a very narrow range of means, while others adhere to policies which permit an extremely wide range of means. Communist governments like to plan in extreme detail, while liberal countries try to avoid planning as much as possible. However, most non-communist countries nowadays no longer adhere to laissez-faire, but use a considerable number of instruments of policy, and this auto-
Problems of planning economic policy

matically implies planning. The details – and sometimes more than mere details – depend on the exact political situation: a government which has the confidence, say, of trade unions, can use more instruments of policy than can a government which lacks this confidence. The rather rigid wage policy in Holland is an interesting example of this.

One general defect in the designing process in many countries is lack of coherence; decisions are often taken incidentally. Isolated decisions are taken to change one instrument at a time often in the belief that a particular instrument can directly achieve a particular aim. A tax is changed because the budget is not balanced, but the effect of the tax on other economic variables, such as employment or price level, is not taken into account. Later, expenditures are changed to affect, say, employment, but disregarding the budget. Isolated decisions are sometimes a consequence of the individual responsibility of ministers to parliament, and of course there are situations where incidental decisions cannot be avoided, for example when a national disaster occurs. But as a rule more organized revisions of economic policy are possible and are preferable. The ideal time to introduce change is of course on budget day; but additional occasions for revision might be fixed for every half or quarter year.

Another difficulty is created by the lack of uniformity in the methods used by various ministries, e.g. for the appraisal of investment projects.

A more systematic process of design cannot be arrived at without a minimum of discipline in the government machine as a whole, and without establishing a fairly precise timetable for the various steps to be carried out. Such a timetable should include the collection of the necessary data, announcement of the aims of policy, proposals for the necessary changes in the instruments of policy, discussion of these proposals in various committees and the final decision by the responsible authorities.

Imperfections in understanding, on the part of politicians and the general public, of some of the interdependencies in economic life must also be considered. Even in government circles, such understanding may be lacking, although this is less often the case. It is not exceptional, for example, for politicians and parliament to ask for higher expenditures, lower taxes and less inflation at the same time. Even ministers of finance may not always have expert knowledge of anticyclical policies. A world problem of increasing importance in this ‘age of inflation’ is whether wages can be left entirely to private negotiations between employers and employees. A further example of misunderstandings concerning the operation of the economic mechanism is the use of export taxes as an easy source of revenue: their detrimental effect on the balance of payments makes this an instrument of very dubious value.

Here an important task arises for scientific research and education, although econometric and other economic and sociological research has already contributed to improving our understanding on various points. Econometric research has led to the discovery of a number of surprising facts with regard to elasticity. The influence of the interest rate on investment activity and the influence of price levels on exports are favourite examples of problems which when they were first studied produced very surprising results. These influences are much less important than was often supposed and the discovery has taught us to distinguish more carefully between short-term and long-term influences.

Similarities and divergencies of methods of design in countries with different social systems

The idea that a fundamental difference in economic policy exists between communist and non-communist countries has become such a part of the propaganda on both sides that we are leading ourselves into more serious controversies than are justified by reality and which, in view of the general political situation, appear to be most unwise. In considering economic policy as a whole we should be conscious that many problems find their origin in the basic needs and characteristics of man. Everywhere people must eat, clothe themselves, have dwellings to live in; youngsters must be trained; the necessary goods are produced in productive enterprises in which a large number of people must co-operate in using machines, raw
materials and mechanical energy, and must also receive wages. The establishments must be maintained and expanded and their expansion must be financed. We could mention many other examples.

Although, between communist and non-communist countries, there is an enormous difference in the size of the public sector and in the degree of planning, two other facts should not be overlooked: the difference between public and private enterprises is diminishing and, even in Russia, a considerable portion of total economic activity is not planned from a central point, simply because it is impossible to do so. The consumption sector is not planned in any detail, only indirectly, by macroeconomic devices. Nor are a great many details planned within each enterprise. The difference in planning is one of degree, not of principle.

There are also many problems of economic policy that are similar; what wage systems to use, what cost accounting and pricing methods, what appraisal of investment projects? Our scheme of the decisions on economic policy could easily be formulated to cover both communist and non-communist policies.

All this implies that there are many questions which could fruitfully be discussed between the two types of countries; one of them or both might discover that there are better methods, either already in use in the other type of country, or lying somewhere between the two extremes. It may even be discovered that the optimum economic order would be somewhere between the extremes and that we should both move towards that optimum. In fact, some movements in recent years, although not all, have already been converging movements.

**Note**

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**References**