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Long-term Planning

by

Dr. Karl-Heinz Horn

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"Opinions Expressed and Positions Taken by Authors are
Entirely their Own and do not Necessarily Reflex the Views of the
Institute of National Planning".

Contents

1. Introductionary remarks dealing with basic questions of long-term planning
2. Obtainment of informations
3. Prognostic methods and procedures
 - a) Time-series research
 - b) Structural research
 - c) Analysis of invariances
 - d) Input-output analysis
 - e) Analysis of marginal values
 - f) Substitution analysis

1. Introductionary remarks dealing with basic questions of long-term planning.

In the GDR prospective planning becomes more and more a main instrument of economic leadership. The growing importance of longterm scientific forecasting is caused by the increasing dynamic of social processes, in economic fields for instance caused by the scientific-technical revolution just underway. Successful prospective planning is based upon the recognition of social-economic laws which exist objectively. Hence the social aim of the longterm economic development is determined by the existing social system and its adequate economic basic law. In our case it is the satisfaction of the population's needs in material, cultural, etc. aspects so far as possible under the given conditions. The quantitative expression of this aim is the maximum growth of the material volume of the available national income per capita. The longer the planning period the more important is the determination of optimum consumption targets, whilst for instance annual planning might take the consumption structure nearly as constant and stressing the minimization of expenditures, which are required to realize the production programme.

In order to achieve and to safeguard the reality and applicability of longterm plans prognostication, planning, and actual management must be seen as a unified complex based upon public ownership of economic key positions, centralized and nationalized information functions, and the codetermination as well as cooperation of the masses of the people. We have to avoid that prospective plans are pure and abstract models and calculations.

An economic prognosis might be defined as a scientific-based forecasting regarding future economic events and processes. Starting from the social needs, social economic laws, and the development trends of science and technology prognostic models are the foundation of prospective plans. Determinating the essence of economic prognosis we consider the following points:

- Prognostication and planning form a unity, but they are not identical.
- In order to grasp the economy in its complexity the construction of models is necessary.
- The character of prognostic models is not a passive but an active one. We assume the possibility to influence future developments actively.
- Prognostic models are stochastic models, their conclusions have a probability character.
- Prognostic models include the analysis of the past, the present, and the future. All prognostic methods can only be based upon actual knowledge.
- Prognostic models require permanent progressive as well as retrogressive calculations in order to set up and to secure the connection between the existing conditions and the requirements of future periods.

In general reality and certainty of prospective models depend on the length of the forecasting period. The longer the analysed time period, the higher the uncertainty of prognostications. The prognostic horizon differs in accordance with the various aims, scopes, purposes, etc. of the projections. Longterm partial projections may cover a period of 30 or even 40 years, complexe prognostication between 15 and 30 years, and the more detailed prospective plans 5 or 7 years.

In the G.D.R. prospective plans become more and more main instruments of economic leadership. Prospective planning is based upon

- analysis of the economic resources and possibilities, including the analysis of the fulfilment of the actual plans;
- prognostications regarding the scientific and technological development, the economic future, and the further progression of education, vocational training, etc.;
- determination of scientific normatives and standards regarding material consumption; effectivity of capital funds, etc. including forecastings about their future development;
- results of balancing in national as well as international scale considering the prognosis of coordination and cooperation with other countries.

All those elements of prognostic planning are shaped as pyramids, although this is not a problem of simple aggregation. At the top of the "pyramid" we find the development prognosis of the entire economy, elaborated by the State Planning Commission in cooperation with the State Secretary of Research and Technique, the Research Council, the Ministries, and the Academies. The development prognosis consists of

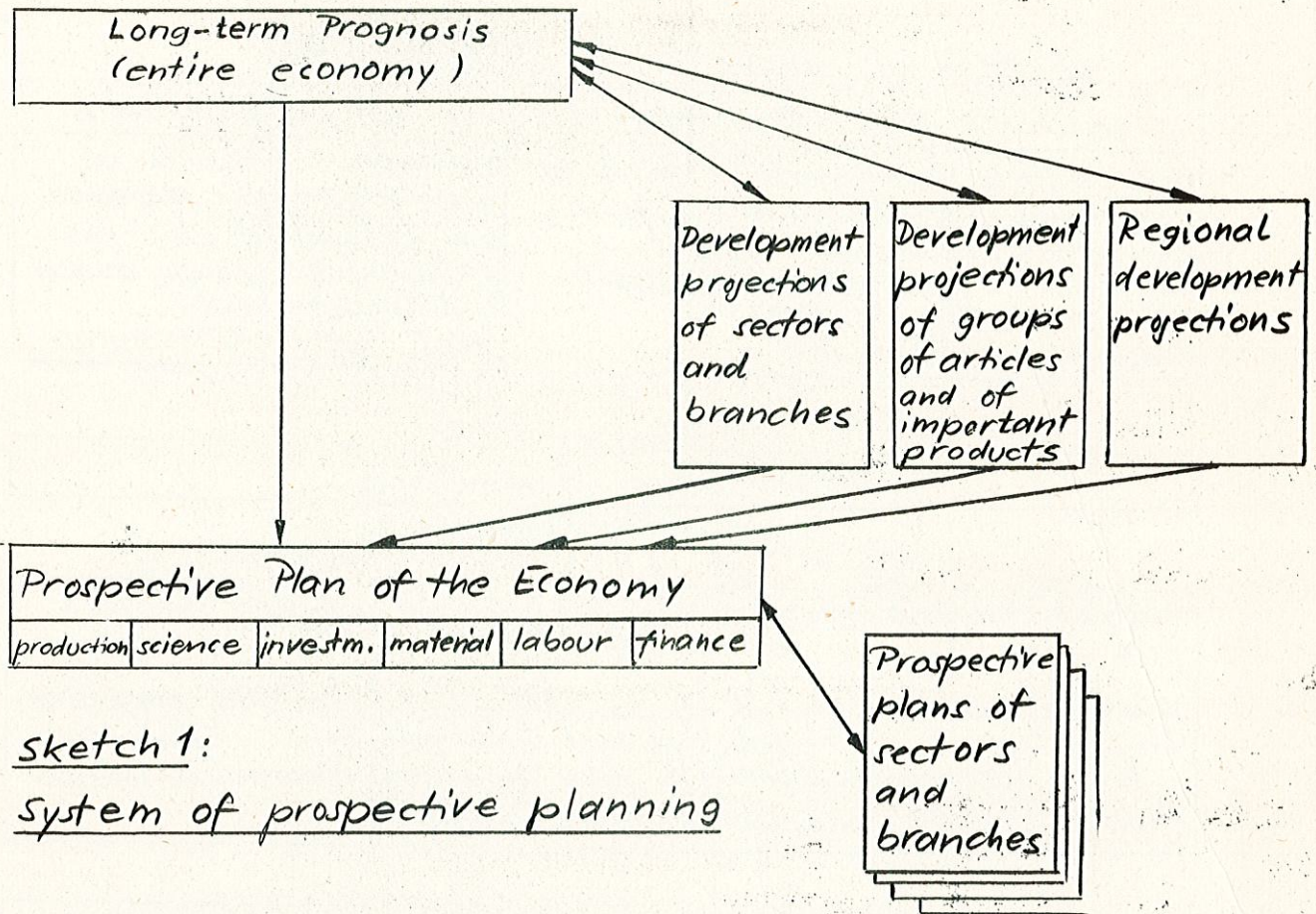
- longterm calculations of development and structure of gross production, national income, accumulation and consumption, based upon trend calculation regarding the growth of population, employment, fixed assets, and labour productivity;
- main proportions and directions of research work;
- development of the educational system;
- estimations of the industrial structure (profile) as well as the structure of foreign trade;
- projections of the raw material sources.

In this stage of longterm planning first and rough optimization take place. Parallel and coordinated with the elaboration of the total development prognosis a series of branch projections are worked out. Based on these approaches it is possible to complete the so-called longterm development conception of the economy as a medium step between prognosis and plan. This conception is characterized by a higher level of balancing and optimization; the facts are more detailed, such as the directions of investment policy, the development of prices, wages, living standard, etc.

To work out development conceptions regarding branches and enterprises cannot be a simple disaggregation of the total conception. In the given frame of only a few but very decisive indicators aimed to safeguard main proportions the branch organizations and the enterprises - at least large and leading enterprises - have to work out their own prognosis and development conceptions. On enterprise and branch level some additional problems come into the foreground, such as the amount and the turn over time of the various assortments; the possibility to substitute products, the disponibility of the different productive elements, the position of the branch or any a partial system in the frame of the total reproduction process.

The following sketch 1 may summarize the system of prospective planning in a simplified manner in the G.D.R. :¹⁾

1) cf. "Betriebs Ökonomik Industrie", part I, p. 99;
Berlin 1967.



Sketch 1:

System of prospective planning

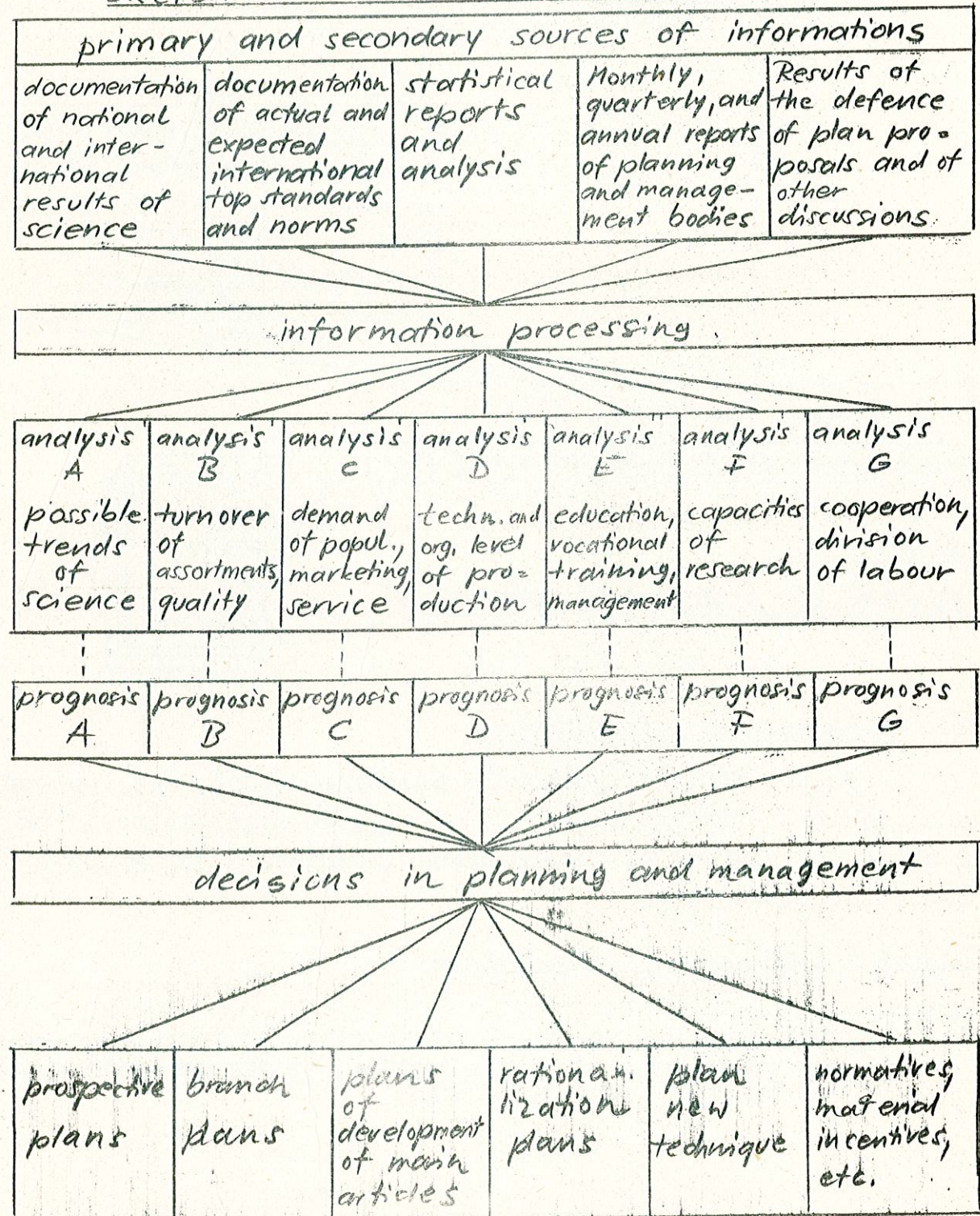
2. Obtainment of informations.

In the field of long-term planning amount, age, contents, and quality of informations are of highest significance. Sketch 2 shows the sources of informations and gives a survey upon information processing.

Sketch 2 : Sources of Informations ¹⁾

- 1) cf. Haustein, in, Socialist Management of Industry, textbook for extra-mural students, edited by the Economic University Berlin 1966, part 2, p. 80.

Sketch 2: Sources of Informations



In the G.D.R. we are going to classify prognostic information regarding their quality. A numerical valuation scale from 0 to 1 was proposed. The criteria of valuation and classification are :

- A. To what extent does the information contribute to improve our knowledge about relatively stable economic relations in form of statistics, regression functions, constant factors, etc. ?
- B. To what extent does the information give us references regarding the future behaviour and strategy of the relevant environment of our system ?
- C. To what extent is the information a result of specific processes (research etc.) inside the own system including the possibility to come to new findings and ideas unknown outside the system ?

The following table 1 makes an attempt to show how to value informations with the aid of the mentioned three criteria. The column "examples" serves only as an illustration, so for instance doctor thesis can appear in the first as well as the fourth group.

Table 1 : Valuation of Informations¹⁾

groups	examples	criteria			valuation
		A	B	C	
1	articles of competitors, patents, catalogues, inquires, etc.	slight	medium	none	0.20-0.39
2	internal materials of the competitors, periodicals, contracts, doctor thesis, etc.	medium	great	slight	0.30-0.59
3	special books, literature about results of research work	medium	medium	great	0.60-0.79
4	scientific findings	great	slight	great	0.80-0.99

1) cf., l.c. p. 75.

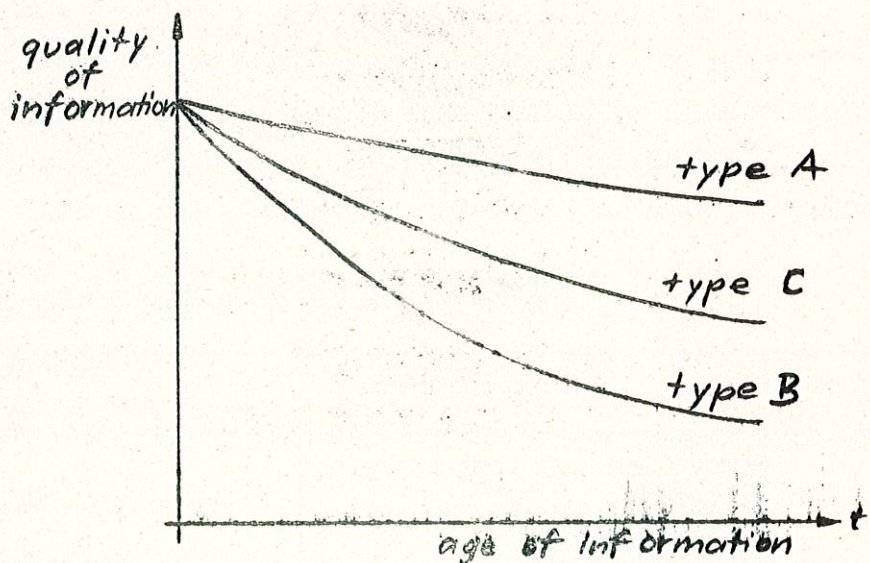
In practice the analysis of informations' quality combines this valuation with the criteria of time, i.e., the age structure of the informations. We can classify the sources of informations in

1. Informations with a great loss of time (more than 2.5 years), such as special books, articles of the competitors;
2. Informations with a medium loss of time (about 1.5 years), such as periodicals, fairs, catalogues;
3. Informations with a slight loss of time (less than 1 year), such as discussions, conferences, cooperation. ¹⁾

In general the value of an information decreases with its growing age, but the behaviour of different kinds of informations differs, as represented by sketch 3 :

Sketch 3:

Relation between
quality and age
of information



1) cf. : Ardenne, Wege zur Steigerung der Weltmarktfähigkeit unserer industriellen Erzeugnisse, Berlin 1963, p. 59.