Introduction

In 1968 a reform of economic management was introduced in Hungary. Since the national economic plan has contained considerably fewer details than before. It contains, however, the major social, economic and technological objectives of development and the progressive tendencies of economic growth. Moreover the plan must establish in conformity with its objectives, the major economic instruments /regulators/, and the principles of their application.

On the base of these changes new vistas have been opened to the application of mathematical models, too. In this field there had been a considerable amount of experiences in Hungary, but the models in accordance with the plan were mostly concentrated to preparing the plan-directives. In the field of economic models the first remarkable achievement was the large-scale natural, value and financial programming model of the fourth Five-year plan /1971-75/ developed in the Institute of Economic Planning and the Hungarian National Planning Office in order to improve the circumstances of decision-making for a medium-term period. Its results were published /7/, and applied in the actual planning work.

In the light of experiences gained by the research workers of the Institute of Economic Planning a new concept is needed for the application of economic models in national economic planning. According to this concept some smaller model should be developed to investigate and solve the various problems of planning. Evidently these models may be of different types and sizes and may cover different time horizon, too. At the second stage of the research work these models forming the elements of a system of models for medium-term national planning can be linked together. In the framework of such a system, in the prognosis phase of drawing up the plan a model being able to answer the most general and basic questions of the next few years can prove to be a useful tool of planning. Up till now the aggregated growth models have not been applied in the
Hungarian planning, despite of the fact they seem to be the most suitable for investigation of economy-wide development problems in a long-range period. The model following here is one of elements of system of models and designed to investigate some of these problems.

1. The main task of the model

The allocation of investments among the various branches of national economy and the current state of the investment market have recently been in the lime light in Hungary. It is because we have to deal with the investments even in such an aggregated model as ours from various points of view.

This model is also focused on the analyses of investment policy and on its consequences. In the assumptions of the model three major aspects of investments are included:

/i/ relation between production of intermediary products and investments. /Materials and intermediary products may create a constraint for the realization of investment./

/ii/ relation between consumption and investments. It is well-known, that a number of growth models investigate the so-called golden path of growth. This model also comprises this relation facing the present with the future.

/iii/ the labour force as a constraint for the production, since this factor may also be a constraint of economic growth /e. g. in Hungary for the time being/. Of course the labour force is more important from the point of view of productivity than from that of number of population.

Summing up the task of the model the possible path of economic growth has to be investigated in the frame of the main aspects mentioned above.