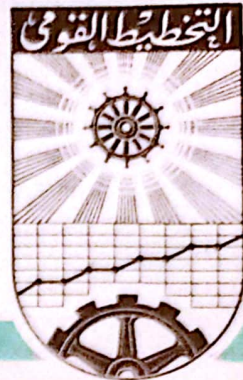


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Classification and Aggregation
of Production in the Planned
Inter-Branch Balances

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INTRODUCTION

For the purpose of managing the economy of a country, for the purpose of planning and accountancy it is necessary to keep an eye on the development of every branch, on the maintenance of the appropriate proportions among them, to follow the change in the significance of branches and their specific share in the national economy. It is necessary also to follow the number of workers engaged in each branch and the results of the labour consumed. If one wants to solve these problems it is necessary to know specific features of each branch, fix its proper place among other branches proceeding from its role in the national economy. For all this there must be elaborated a scientifically sound inventory of all the branches in which the branches should be systematized in certain order indicating the enterprises which are related to each of them.

Such an inventory which corresponds to the functioning system of social division of labour and characterizes, in main features, the branch composition of the national economy is called the classification of branches for the national economy.

The problem of classifying national economic branches is one of the key problems for any economic study. The study of the social product and national income, the construction of a system of balances, and solution of other economic problems requires a clear - cut classification for the economic branches.

In conformity with the preliminary discussion on the problem in question it was found expedient to consider the problems of classification and aggregation of production according to the experience of the USSR; at this, account was taken of the fact that this question is dealt with in a number of UN publications, and in particular, in "Problems of Input-Output Tables and Analysis "Studies in Methods, Ser.F.No.14,1966).

I. BASIC PRINCIPLES OF CLASSIFICATION FOR THE BRANCHES OF THE NATIONAL ECONOMY

All kinds of activities within the national economy are subdivided into 2 spheres: the sphere of material production comprising the production of material goods and the non-productive sphere comprising services, and also administration and defence of a country.

The differentiation into productive and non-productive spheres is of paramount economic significance. The sphere of material production is the decisive sphere of human activities. This is where means of production and consumer goods, the social product and national income are created. The non-productive sphere does not create any products but in return for the consumed material goods it renders various services to the society. The possibilities of the non-productive sphere depend on the development level of material production.

The distinction of material production and the non-productive sphere is the most important requisite to study each of them and their relationships, the most important prerequisite of classifying branches in the national economy.

All kinds of activities in terms of producing material goods and in terms of rendering services are combined into large groups - branches, according to the nature and results of the labour applied.

Social - economic units refer to this or other branch of the national economy subject to the character of their economic or social functions. It means that, the basic feature of grouping into branches, is the type (kind) of activity which is performed

by this or other social - economic unit. Thus, enterprises and institutions refer to certain national - economic branches depending on the nature (character) of their basic activity.

Various types of activities in the sphere of material production are grouped into the following branches of the national economy:

INDUSTRY,
CONSTRUCTION,
AGRICULTURE,
FORESTRY,
FREIGHT TRANSPORT,
COMMONICATION MAINTENANCE OF MATERIAL PRODUCTION,
THE BRANCHES REALIZING CLRCULATION OF GOODS,
OTHER BRANCHES OF MATERIAL PRODUCTION.

The process of formation for new comprehensive branches of material production is a long one, therefore the inventory of branches in material production can be comparatively stable. But the fomation of new branches within industry, construction or transport, esp. in industry under modern technological level, occurs rather rapidly, that is why the applied classifications must be periodically revised.

All branches of material production participate in the process of social reproduction, but in a different way. These differences serve as the basis for differentiating one branch from another. In accordance with this the branch of material production is an aggregate of enterprises performing homogeneous economic functions in the process of social production. In each branch the process of material goods production has its specific features, which rest on the peculiarity of influencing over

nature, on different role of natural environment in the process of production, and this becomes visual in the character of the intermediate products and means of labour applied, in the specific features of the manufactured products.

The activities of the non-productive sphere are grouped into the following branches:

HOUSING - COMMUNAL SERVICES,
EDUCATION, CULTURE AND ART, PUBLIC HEALTH SERVICES,
SOCIAL MAINTENANCE AND PHYSICAL CULTURE,
SCIENCE AND SCIENTIFIC MAINTENANCE,
FINANCE, CREDIT, SOCIAL INSURANCE,
ADMINISTRATION, OTHER BRANCHES OF THE NON-PRODUCTIVE SPHERE.

All the non-productive sphere branches, according to what function the services which are connected with them perform, in the society, are subdivided into 2 groups.

The first group comprises the branches, services which are called forth to provide for individual cultural and social requirements of the society members. These are: housing and communal services, education, culture and art, public health services, social maintenance and physical culture.

The second group combines the services which satisfy the collective requirements of the society. These are: science and scientific maintenance, finances, credit, social insurance, administration, and other branches of the non-productive sphere.

Such subdivision of branches in the non-productive sphere into 2 groups is brought about by the fact that particular kinds of activities on creating services satisfy only individual requirements of individual society members and must be taken into

account while determining the level of material standards of population whereas a good number of services provide for the conditions of collective community within the society as a whole.

It is obvious from the above said, that the national economy represents the integral unity of interdependent enterprises and branches supplementing each other. But the national economy cannot be taken as a simple sum, mechanical combination of a great number of enterprises and organizations. Each enterprise is a linking unit in the system of social production.

Under the modern development level of an economy and the nature of social production not a single enterprise can function without relations with other enterprises. Therefore, no matter which differences or specific features of individual branches, and enterprises were studied, one should not forget about the fact that these are the differences within a unity - that each branch carries into effect only one of the stages of social production.

In the functioning classification the notion of a branch bears a double nature: "a branch of the national economy", and a "branch of industry, agriculture", etc. The branch of the national economy is a wider notion. It means an aggregate of enterprises and institutions performing essentially identical functions within the system of social production (the industry produces goods, transport transfers them from one place to another, etc). In the narrower sense of the word the notion of a branch has some specific productive-technical shade of meaning. In connection with this By "a branch" in the narrow sense of the word is conventionally understood (for instance by "a branch of industry") an aggregate of enterprises, which are

characterized by the unity of the physical form of manufacturing a product, by the homogeneity of the consumed raw materials, by the community of technology, by the similarity of the professional composition of the staff personnel.

The variety of technological production processes, different types of processing and utilizing raw materials require their clear - cut classification into branches, i.e. their grouping into homogeneous aggregates. Proper classification of enterprises into branches and of branches - into groups is necessary for the purpose of forming the proportionality for economic development and bears exceptional importance for the whole process of planning.

At present, several types of classifications are made use of, each of them designed for the purpose of solving specific problems.

One of the important classifications is the grouping according to the economic purpose of the output produced, irrespective of at which enterprise or in what branch it is produced. According to this classification all the industrial production is divided into 2 large groups - production of means of production (group A) and production of consumer goods (group B). The division of all the industrial production according to this symptom into 2 groups is of paramount importance for the purpose of solving many problems of expanded reproduction. Nevertheless such classification according to the economic purpose of output does not enable us to solve a great number of important problems. In particular, according to it one cannot group enterprises into individual branches, or combine homogeneous branches into large groups. In virtue of this fact, another classification is utilized according to the aggregate of symptoms (characteristic

features) which characterize the branch (unity of a product's purpose, homogeneity of the utilized raw materials, unified technology.) In practice, in this case, they distinguish detailed and aggregated classification. The detailed classification represents the grouping of homogeneous enterprises into a branch, the aggregated classification represents the grouping of homogeneous branches into larger (aggregated) branches of industry. The detailed classification is based on simultaneous utilization of all the three characteristic features of a branch - physical unity of a product, method of processing, homogeneity of raw materials. For example, the textile industry is subdivided into the wool industry, the cotton industry, hosiery, and so on.

The same characteristic features, but in a more general form, are utilized to obtain an aggregated classification - fuel industry, chemical, metallurgical, metal - processing industries etc. At this, the aggregated classification is based rather on some singular characteristic feature, the one which is the most characteristic, for instance, the unity of a product's physical purpose - the fuel industry, foodstuffs, engineering. Metal processing industry is grouped according to homogeneity of the consumed basic material - metal; according to the same characteristic feature the woodworking industry is combined. Chemical industry is combined according to the community of the technological process, etc.

Thus, different approach to one and the same characteristic features of a branch can give consequently their different grouping.

If utilizing the aggregate of characteristic features in the narrow sense of the word, one can distinguish about 60 individual branches in engineering, over 40 branches in food industry, about 30 branches in chemistry.

The detailed classification gives, as a whole, about 400 branches of industry and represents a higher stage of classification.

The aggregated classification of industry, accepted at present in the practice of planning and accountancy, is as follows:

1. electric power,
2. oil extracting industry,
3. petroleum processing industry,
4. gas,
5. coal,
6. schistose industry,
7. peat industry,
8. ferrous metal industry,
9. non-ferrous metal industry,
10. chemistry and petro - chemical industry,
11. plastics, fibre-glass materials and articles made of them,
12. engineering and metal processing,
13. timber, pulp - and - paper and wood working industry,
14. building materials industry,
15. glass industry,
16. porcelain and faience industry
17. light industry,
18. food stuffs,
19. fishing,
20. microbiological and mixed feed (fodder) industry,
21. medical industry,

- 22. printing and publishing,
- 23. other branches of industry

In the classification of industrial branches one can distinguish sub-branches. Thus, the ferrous metal industry has 9 sub-branches, the non ferrous metal industry -- 14, food industry -- 23, etc. In engineering one distinguishes the following 14 sub-branches.

- 1. heavy, power and transport engineering,
- 2. electrotechnical engineering,
- 3. petroleum and chemistry engineering,
- 4. lathe and instrument making industry,
- 5. production of work - pieces and ready articles applied within engineering as a whole,
- 6. instrument making;
- 7. automobiles
- 8. tractors and farming machines,
- 9. building, road-making and communal engineering,
- 10. engineering for light, food and other industries,
- 11. metal articles of wide profile,
- 12. other engineering and metal processing for productive-technical use,
- 13. repairwork in engineering,
- 14. other types of engineering, etc.

A very important one is the classification of branches according to their influence over the objects of labour, in accordance with which fact all the industrial branches are subdivided into two large groups:

- a) extracting (mining) branches and
- b) processing (manufacturing) branches.

The mining branches comprise the enterprises which extract natural raw materials for the processing branches, and also the timber enterprises.

The processing branches turn raw materials into finished or semi - finished products.

The manufacturing industrial branches are subdivided into two sub-groups 1) those which directly process raw materials, e.g. metallurgy and 2) those which process the raw materials which were formerly preprocessed., e.g. engineering.

This subdivision is necessary and significant for the purpose of securing correct relationships among branches while elaborating more substantiated plans.

But the classification thus observed is inapplicable to constructing the inter branch balance of production and distribution of output which is of growing importance in planning and statistics. On basis of this classification it is impossible to study and reveal with sufficient accuracy the inter dependencies among branches, which arise from the physical - material relations among them. If it is known, for example, that the output increase of motor cars is 10 percent, this does not yet mean the same increase of production in the branches directly connected with motor car industry (e.g. production of engines, tyres, etc., for motor cars). It is explained by the fact that

the enterprises which are related, in accordance with the functioning classification, to motor car industry do not produce only motor-cars but also refrigerators, instruments, etc.

For the purpose of fixing a sufficiently accurate interdependence between branches it is necessary, that the branches should be "pure", i.e. should not contain those productions, the output of which corresponds to the primary output of other branches?

The branches thus distinguished will be more homogeneous according to the composition of the utilized raw materials, the nature (character) of the technological process and the purpose of output., which will make it easier to study the relationships among them, to plan their further development, to make up optimal variants of state development plans on the basis of accurate mathematical calculations.

Thus, different groupings of branches of the national economy are indispensable subject to concrete economic targets.

These groupings are eventually revised and made more perfect, new groupings are created in accordance with the requirements to improve the planning of the national economic production.

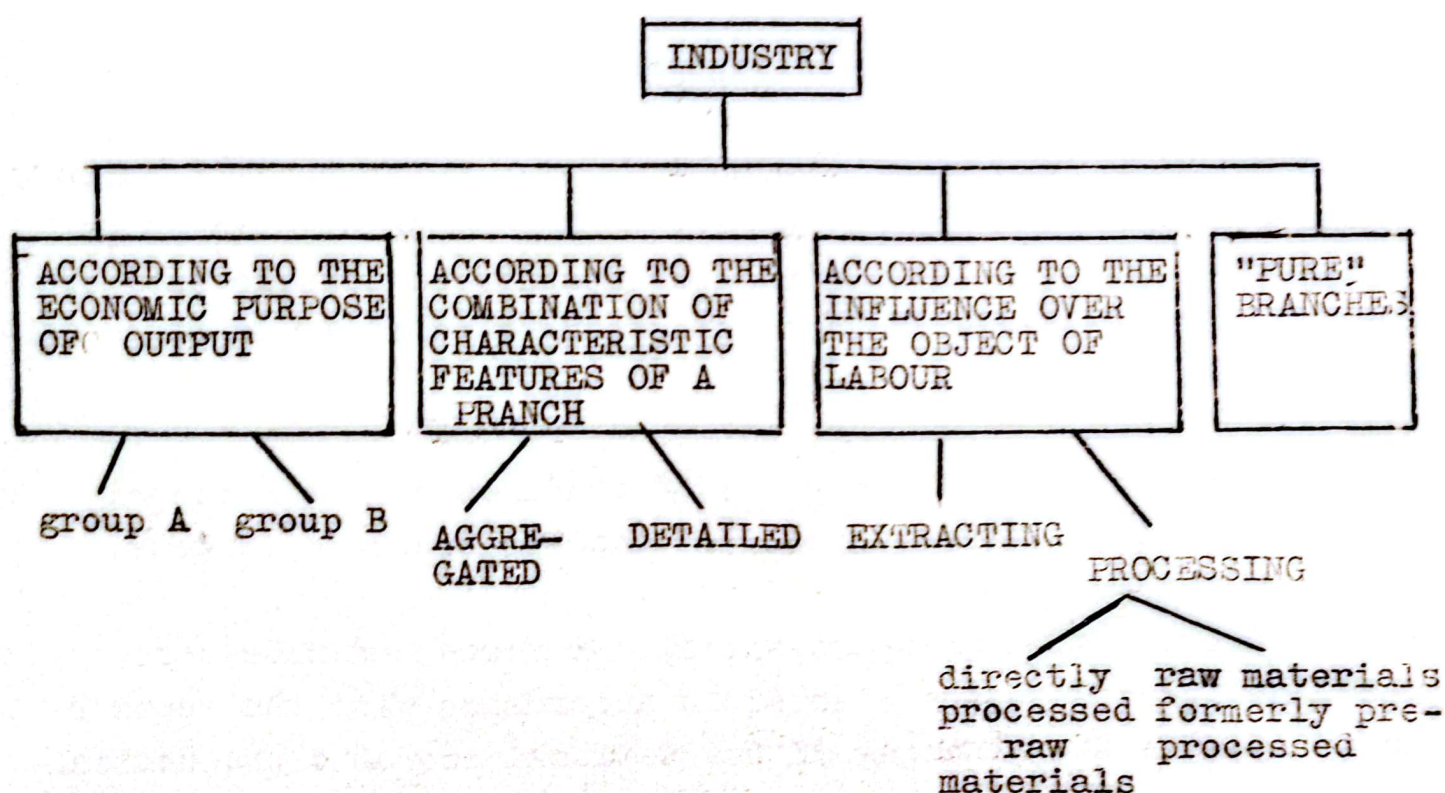
From the example of the industrial classification we see that 4 types of classification are possible:

- a) according to the economic purpose of the output produced;

- b) according to the combination of characteristic features for a branch (unity of a product's physical purpose, homogeneity of the utilized raw materials, common technology);
- c) according to the influence over the object of labour,
- d) distinction of "pure" branches.

This can be presented in the form of the following scheme:

CLASSIFICATION OF INDUSTRIAL PRODUCTION



In the same way, other material production branches are classified, for instance, agriculture. Agriculture consists of two main and interrelated branches:

Cultivation of crops and cattle - breeding.

Cultivation of crops is subdivided into a number of branches -- field crop cultivation, vegetable growing, fruit - growing, cultivation of meadows, etc.

Cattle - breeding is subdivided into the following branches:

beef cattle, poultry raising, bee keeping, fishing, fur farming, silkworm breeding..

But the grouping of agricultural enterprises according to these branches is not practically realized.

The above classification of branches for the national economy is not the only possible one in planning and statistics. Other classifications for special purposes are practically utilized.

Reflecting the structure of the national economy and social labour, the classification of branches bears historical nature: the national economy develops, social division of labour is made deeper, the existing branches undergo changes and new branches appear, the classification of branches within the national economy also changes. But the principles of constructing the classification, the basis for differentiating between productive and non-productive spheres of the national economy are hard and fast.

II. Formation of "Pure" Branches and the Nomenclature in the Inter-Branch Balance.

Formation of the so-called "Pure" branches, under which an aggregate of productions manufacturing homogeneous types of products is meant, becomes necessary for the construction of the inter-branch balance. In this case a branch is regarded as the sum of productions manufacturing a homogeneous product irrespective of the fact if this product is primary or secondary for the enterprise.

An inter-branch balance drawn up on the basis of "pure" branches characterized with greater accuracy productive relationships in the national economy.

In the practice of making balance estimates in terms of traditional methods, the separating or "pure" branches was also made use of.

Thus, the pure output of engineering was set aside in the total volume of industrial output when compiling the state development plan of the USSR for 1964-1965, the procedure being done for the purpose of balance estimates of the requirement for metal and electric power. In order to obtain this indicator, from the output value of the engineering and metal processing enterprises was deducted the value of the non-engineering and non-metal processing output of these enterprises, and from the output value of all the non-engineering and non-metal processing enterprises there was deducted the output value of engineering and metal processing.

The statistical inter-branch balance of production and distribution of output in the national economy of the USSR for 1959 was also elaborated in the aspect of "pure" branches.

To form a "pure" branch the amount of primary and secondary output was determined at the enterprises belonging to the branch under study and within the secondary it was determined to what branch these or other products belonged.

As a result, the branch was "purified" from the secondary output and further, the data thus obtained were summed up with the corresponding primary output manufactured at the enterprises of other branches.

Finally, there was obtained a "pure" branch, the gross output of which differed, to some extent, from the amount of gross output of the corresponding branch, accepted in the methodology of planning.

The table given below testifies to the deviation in the valuation of gross output for one and the same branches but constructed according to different principles:

Relative quantity of gross output in "pure" branches versus the gross output of the branches accepted in the methodology of planning.

(the gross output of the branches accepted in the methodology of planning is 100 per cent)

Industries of production	per cent.
Ferrous and non-ferrous metal industry	104,8%
Fuel and Electric power	106,8
Engineering and metal processing	92,0
Chemical industry	111,6
Forestry, timber and paper industry	95,6
Light industry	100,5
Food industry	100,5

As a result of "purifying", the quantity of the engineering output considerably decreased and the output of chemical industry increased. It testifies to the fact that at the engineering and metal processing enterprises a large quantity of production is that of the secondary nature which considerably exceeds the quantity of the engineering and metal processing output produced in other Branches.

The situation is different in metallurgy, chemical and fuel industries. Here, the output corresponding to the primary output of these branches is manufactured at other enterprises in greater amounts, than the volume of the secondary output of the given branches.

The specific share of the secondary output in the gross output of a branch depends, to a certain extent, on the accepted

classification of the inter-branch balance. The more detailed the balance's classification is, the greater becomes the specific share of the secondary output;

In spite of the fact that a "pure" branch combines the productions manufacturing homogeneous types of products it does not appear to be absolutely homogeneous in its composition. The "pure" branch may comprise the productions, different according to the technological level, according to the extent of production organization, according to their geographical position, etc. It cannot but influence over the input structure of the homogeneous output combined into one "pure" branch. According to concrete production circumstances the input structure of one and the same product at different enterprises will be different, e.g. the input of manpower, materials, electric power, etc. In this connection, one may single out separate groups within the "pure" branch with account taken of the difference in input structure, in productive technological or geographical circumstances. Thus, for example, the subdivision into various coal-fields (or coal basins) within the branch "Coal" becomes important not only due to the fact that the coal fields are a long way from each other but also in view of the fact, that the technology of the fields (basins) may also be absolutely different. Or else the necessity of subdividing the branch "Electric power" into groups is connected with absolutely different types of the enterprises -- hydro - and thermo electric power stations. It is obvious that the input structure and the production cost per unit of output at these electric stations will be different.

The examples thus given show that a "pure" branch is not fully a homogeneous aggregate. It may have more homogeneous groups according to various specific features. This fact may lead to some particular features in the estimates of the inter-branch balance.

The first such particular feature will consist in improving the accuracy of estimates, which is reached by means of a more detailed differentiation of the conditions of production. The second specific feature is making easier the delivery of the plan to concrete executive bodies, as in this case the detailed information is available in respect of the structure of the branch itself, etc.

Together with this, it is necessary to take into account that the degree of detail in the Branch composition is determined, to a considerable extent, by the scope of planned - economic problems which are solved with the aid of the inter-industry balance and by the methods of its elaboration.

While elaborating the classification of Branches and products for the inter-industry balance it is also necessary to proceed from the classification of Branches and products existing in the practice of accountancy and planning.

But the availability of great specific share of the secondary (not belonging to the branch) output in a number of enterprises, which, while constructing an inter-branch balance, is to be redistributed among the respective branches, brings about the fact that the data about the output of individual branches of the inter-branch balance ("pure" branches) cannot be directly

compared to the indicators of the output of the same called branches in the national economic plans and statistical elaborations.

In this connection there appears one of the most complicated and at the same time practically extremely significant problems -- to make the branches of industry in the inter-branch balance consistent with those of the state development plan and the state statistics.

In our opinion, the best solution to this problem would be to establish in the system of the plan indicators and accountancy some additional indicators in terms of "pure" branches. Such an assumption would not only solve the problem of obtaining planned and statistical information for the purpose of constructing the inter-branch balance but also would play a positive role in the matter of improving accountancy and planning. "Pure" branches of production enter, as a separate link into the nomenclature of the inter-Branch balance. The inventory of the products (constituting the "pure" branch) which vertically and horizontally enter into the chess-cross table of the inter-branch balance is called the nomenclature of the inter-branch balance. Hence, the question of forming the "pure" Branch is closely connected with the nomenclature of the inter-branch balance.

← The nomenclature of planned inter-branch balances in money terms covers, as a rule, the whole of the gross social product, but in physical terms it practically does not cover the whole of the gross social product although the number of components in the nomenclature can be increased.

The nomenclature of the inter-branch balance in physical terms can be limited, on the one hand, by the efficiency of utilizing electronic computers; on the other hand -- by the objectives of economic analysis on an all - country scale, when the nomenclature of production at several hundred thousand items seems hardly reasonable.

The basic principles of forming the nomenclature of the balance are predetermined by the requirements to which the planned inter-branch balance in physical terms must correspond. Viz. these requirements come to the following:

The balance should comprise concrete industrial, agricultural, building and constructing produce. This production must be essentially significant to satisfy the requirements of population and, respectively the production requirements of the national economy. The inventory of production must be consistent in inter-branch planned balances in physical and in money terms.

Besides this, when selecting the nomenclature for the inter-branch balance in physical terms the following points are taken into consideration: homogeneity of the input structure of output and unification of technology; unified aim of output and homogeneity of the use properties of the outputs; the national economic significance of the outputs, the scope of the outputs.

All these criteria are not applied well apart from each other. When choosing this or that component of the balance nomenclature an all-round, complex observation of these conditions must be ensured.

While elaborating the products nomenclature of the planned inter-branch balance in physical terms, in the opinion of some economists, it is necessary to start from the fact that the groups of products representing each branch should combine about 90 per cent of the branch output of the balance in money terms.

It is a very difficult problem to combine the output to such an extent by all the branches. Therefore there are several approaches to the compilation of the nomenclature for the planned inter-branch balance in physical terms.

In particular, the nomenclature of the balance may contain the component "other products" by each branch of production.

For example, in the inter-branch balance in physical terms the ferrous metal industry can be represented by ores, cast-iron, steel, rolled metal, metal wares, etc; and all those products which are not mentioned by the items will come under the component (item) "other products of the ferrous metal industry".

The products incorporated into the nomenclature of the inter-branch physical balance are to be given in physical units of measure. Although the item "other products" is to be given in money terms.

It is noteworthy however that, in the interbranch balance in physical terms, part of the items can be, practically, presented in money terms. These are the items which, in the practice of

Planning and statistics, are not accepted to be valued in physical terms, for the latter characterize neither the total volume, nor the material or labour capacity of the output coming under the corresponding groups.

These are, for instance, the items:

"Automation instruments and devices".

"Products of Chemical -Pharmaceutical Industry," etc.

Furthermore, when determining the nomenclature it is necessary to take into consideration the practice of working out material balances.

XII. "Principles of Aggregating Production in the Inter-Industry Balance".

For the purpose of compiling the inter-branch balance and elaborating the classification of branches, it is necessary first all, to fix the number of branches distinguished in the balance i.e. the degree of their aggregation.

The limit of reasonable and practically possible aggregation of production is different and can be set depending on the purposes of elaborating the balance.

When constructing the inter-industry balances of individual industries the latter can be detailed to a greater extent than the inter-industry balance for the national economy.

If studying for instance, the relationships of coal industry to other industries one may distinguish particular methods of extracting coal, separate types and sorts of coals.

The construction of inter-branch balances for individual branches such as chemical industry, engineering, fuel industry, building and construction, agriculture, etc. is of great significance for a deeper study of major and most decisive fields of domestic production and for improving the planning of these industries.

The inter-industry balance for the national economy as a whole cannot be compiled with such detailed classification of branches and production units, as that of the inter branch balances for individual branches. This is determined not only by technical prerequisites (absence of information, clumsiness of the

table etc.) but also by economic inexpediency, because the inter-branch balance for the national economy as a whole confronts more general objectives than those of the inter-branch balance for an individual industry.

Aggregation, by which we mean the grouping of production into larger homogeneous groups, takes place following the two basic characteristic features:

- 1) the economic aim of the output,
- 2) the technological means of its production.

The extent of aggregation for constructing the inter-branch balance must be fixed on the basis of a deep scientific analysis of the process of social reproduction and originating from the objectives, set before the national economy at the given stage of development.

The creation of a scientifically sound classification, the number of branches in it and the extent of their aggregation are determined by the requirements of the economic management and planning, by the requirements for revealing the most essential relationships and proportions, necessary for the analysis of the economy and the national economic planned management..

In accordance with this, the number of aggregates, derived from combining branches is not constant. But besides the general economic targets, the extent of aggregation depends much on what detail the information has about the structure of the system under study. Under such approach the concept "BRANCH" becomes a derivative from two other more elementary concepts "product" and "technological means."

In this case by the product is meant some finished result of the process of labour. The consumption of this product can be separated from the process of production if the product has the form of a thing (a material good), or else it practically coincides with the process of manufacturing the product itself if it has the form of a service or energy.

The following characteristics -- homogeneity vertical and homogeneity horizontal can provide the basis for combining (grouping) products and their respective technological means into larger units, aggregates of homogeneous products.

The definition of homogeneity of two products is closely connected with the scheme of the inter-branch balance. Two products are said to be homogeneous vertically if they have identical or almost identical structure of inputs.

To measure the identical input structure there can be utilized the coefficient of correlation -- the closer it is to 1, the more identical is the input structure of the two products under consideration.

Two products are said to be homogeneous horizontally, if they are in one and the same proportions utilized for manufacturing other products. In this case it is also rightful to speak of the products almost homogeneous horizontally.

One should distinguish between the aforementioned notions of homogeneity of products and vertical and horizontal aggregation.

Vertical aggregation of two products takes place in case when one of them is utilized only in manufacturing the other and does not serve for any other production purposes. From this view-point homogeneous are a raw material and a finished products, e.g . iron ore, cast iron, etc.

A more commonly applied case is the partial utilization of one product in manufacturing a limited number of other products.

From this view-point there can be considered homogeneous (partially) the polymetallic ores and each metal derived from these ores. The given instance testifies to the effect that the products derived from one and the same raw material may be considered vertically homogeneous.

It can be said about vertical aggregation in theoretical aspect, that it comprises such products (and technological processes), which form the production vertical line "raw material -- finished product."

Use values of products provide the basis for aggregating products horizontally.

Products are combined horizontally only when they satisfy one and the same scale of requirements, productive or non-productive.

Invariability of correlation between two products, utilized to satisfy the same requirements can be considered to be a more accurate definition of horizontal homogeneity.

The main difficulty in the realization of this regulation consists in the measurement of requirements.

The fact is that for some requirements it is possible to indicate only a summary demand for the given group of products. Thus, for instance, when planning a supply of fodder for live-stock the total requirement for concentrated fodder is estimated but hereby it is not projected what crops to grow for the purpose.

A similar situation arises in all the cases, when the total requirement is projected in some arbitrary units. The character of such approximation depends essentially on the level at which the estimate is carried out.

Another kind of aggregation is the so-called partial horizontal combining of branches. In order to effect this kind of aggregation, each industry is subdivided into a number of processes. Of all these processes, singled out within each branch, the processes with identical input structure are to be picked up. They can be aggregated into a special arbitrary branch.

Such are the basic qualitative features of aggregation most of which are made wide use of in practice.

Thus, a scientifically sound classification of branches in the national economy is a significant means in studying and analyzing the phenomena of social life. The classification of branches for the national economy takes the key position as the basis for studying proportions and relationships in the national economy. Its constant perfection becomes necessary for the purpose of utilizing up-to-date methods of planning and management within the national economy.

