

PROBLEMS OF THE PRODUCTIVITY OF LABOUR IN MEAT INDUSTRY  
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**ABSTRACT:** The theoretical and methodological aspects of labour productivity are discussed in the paper. The panel of authors will acquaint the participants in the Congress with the current methodological formulations and parameters for labour productivity measurement. From methodological point of view the conditions and factors, determined the raising of labour productivity in particular plant of meat industry and common for the whole subbranch, will be stated. A considerable part of the paper is devoted to the scientific research realization in the sphere of labour productivity. A factor analysis of the labour productivity results will be made at meat yield, meat cuts and meat ground production, meat products production (sausages, specialties, meat cans etc.), considering the current tendencies in this trend and with the use of modern electronization means. The factors, which are with priority in the analysis, are: advance in science and technique, production and assortment structure, raw materials resources, output realization and production organization, labour and management. The paper finishes with concrete conclusions and suggestions of theory and practice. We consider, that they will be useful for evaluation of meat industry activity and in international comparisons.

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In current living conditions, the advance in science and technique develops with accelerated rates. Possibilities of extensive factors decrease continuously, therefore a determinant role for country economical development plays labour productivity increase. The high and stable rates of increasing the social labour productivity are the most significant objective requirements for living standard improvement, for working hours shortening and ensuring of better conditions for work and rest. Labour productivity is the human ability to create material and cultural wealth, in order to satisfy the people necessities. It is characterized in general with efficiency of time consumption for production of unit production, definite quantity labour for production of more consumer goods. In PRB we distinguish individual and social labour productivity. The individual labour productivity concerns only consumption of living labour, until the social labour productivity renders consumption of living and past labour, materialized in raw materials, materials, fuels, means of labour, etc., used for receiving of new output. Measuring of individual labour productivity is established by system of valuable, natural and labour parameters. The main valuable parameter in meat industry is the relationship of industrial production in trade prices to personnel number or workers number. This parameter is presented with the following formula:

$$P_1 = \frac{IP}{P_{n(\text{work})}}$$

where:  $P_1$  - labour productivity of one person from the personnel or one worker, in levs.

IP - annual volume of industrial production, in levs.

$P_{n(\text{work})}$  - personnel or workers number, in numbers.

With valuable parameter can be evaluated the level and dynamics of labour productivity on subbranch level and enterprise level. In order to overcome the influence of continuously changing prices, it is necessary to work with unchangeable prices to a definite data or fixed period. Because of polynomenclatural character of production in meat industry, according to natural parameters are used two ways of labour productivity determination: a/ Labour productivity in conventional-natural units, by produce conversion from physical into depersonalized type, on the base - meat with bones, i.e.:

$$P_{1(c.n.u.)} = \frac{\sum_{i=1}^n Q_i \cdot K_i}{P_{n(\text{work})}}$$

where:  $P_{1(c.n.u.)}$  - labour productivity in conventional-natural units, tones.

$Q_i$  - produce volume from i-type, tones.

$K_i$  - coefficient for produce conversion from i-type in meat with bones (K is different, according to the type of production).

The parameter is used for comparative analysis between the enterprises and for reserves revealing in order to improve labour productivity. b/ Labour productivity in conventional-natural units on the base of labour consumption. Here the labour consumption of a given type is accepted as one: for meat yield - the labour consumption of 1 ton meat from cattle and for meat processing - the labour consumption of 1 ton perishable sausages. In order to compare labour productivity between particular enterprises, the labour parameter is used. It is characterized with worked off man-days and man-hours for a production unit and forms the labour consumption of production. We use this parameter successfully in comparison of our level with the level of industrial countries. The parameter, which reflects most completely the labour costs for production of production unit and the economy of living and materialized labour, is the social labour productivity. In the centre of maturity and progressive possibilities of every social system is the social labour productivity. The receiving of production unit at min consumption of necessary social labour is a principle of the efficiency of social production. On national level the social labour productivity is measured with newly created value, national income, respectively, shared from one occupied person in national production. On branch/subbranch level, meat industry level respectively, is used the net production of one occupied person. For a period 1980-1989, the level and dynamics of individual and social labour productivity in PRB's meat industry are visually presented in the graphic drawings - fig. 1 and fig. 2. For the period under



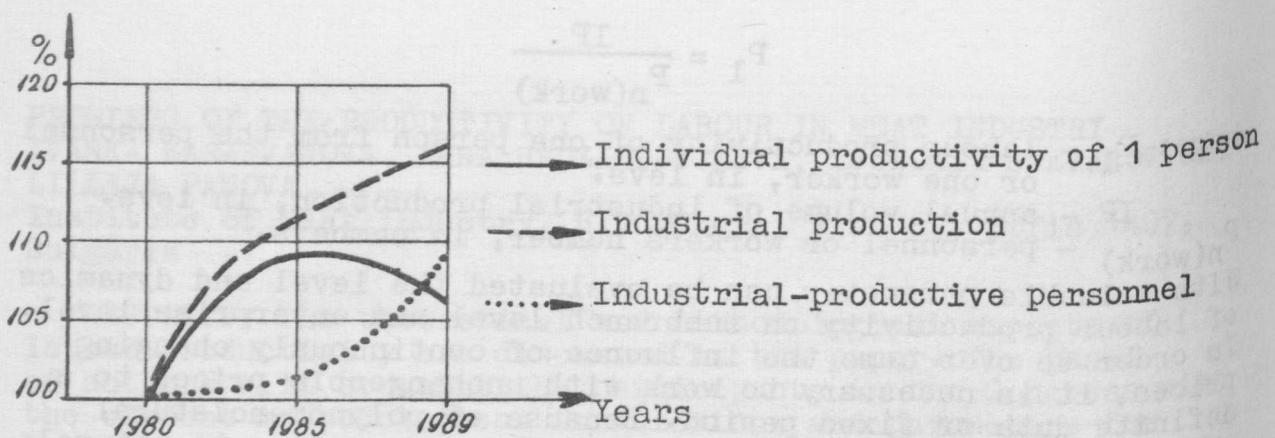


Fig. 1.-Dynamics of produced industrial production, number of industrial-productive personnel, and labour productivity of 1 person for a period 1980-1989

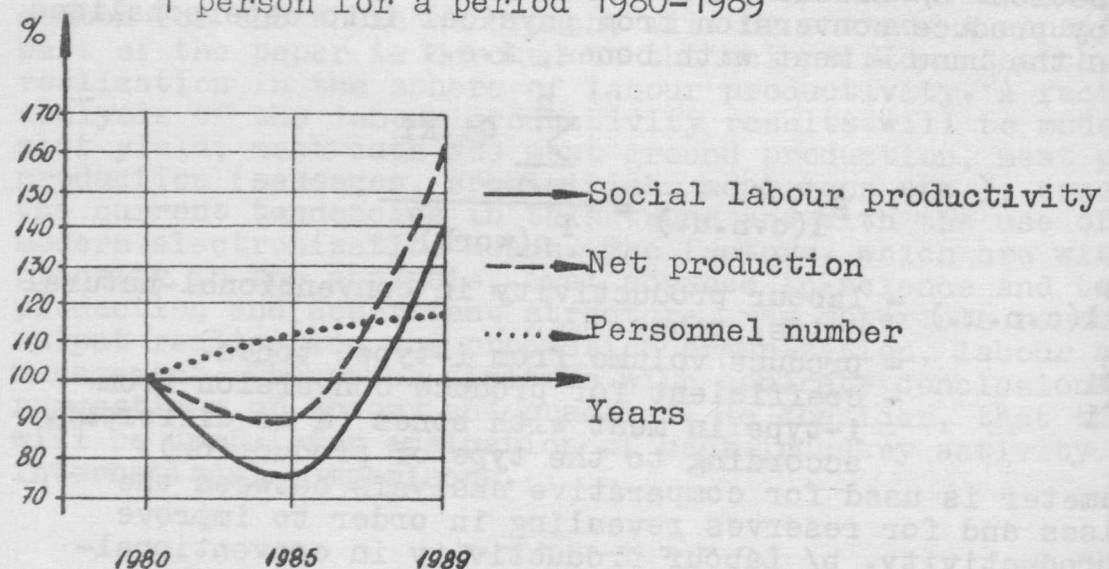


Fig. 2.-Dynamics of net production variation, personnel number, and social labour productivity for a period 1980-1989

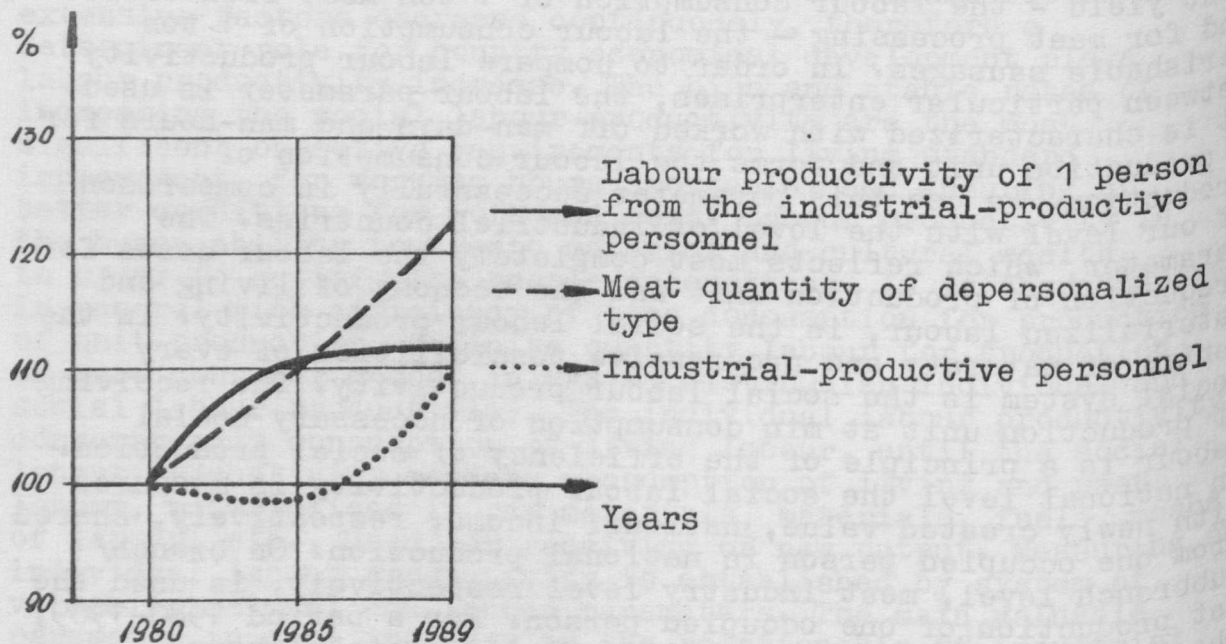


Fig. 3.-Dynamics of labour productivity in conventional-natural units

examination, the average annual rate of increasing the individual labour productivity is 0.8%, and the social labour productivity - 4.25%. In order to achieve these results, a favorable influence have been exerted: - the greater growth of industrial production - with 12% according to the growth of personnel number; - more significant increase of net production - with 47.6% according to the growth of personnel number; - the forestalling growth of active component of the net production - the profit - with 123.2% according to the growth of wages fund. The lower growth of personnel number in bulgarian meat industry proves, that this subbranch is moved on preliminary to intensive way of development. It is characterized with dramatically decrease of role of living labour as a factor for production increase. The labour productivity dynamics in conventional-natural units is visually presented on fig. 3. For the period under examination, the greater production growth of depersonalized type - meat with bones, with 13.2% according to the growth of occupied personnel, determines the increase of labour productivity in conventional-natural units - with 12.1%. The most favourable is the parameter variation during 1985, when the production increase /110.0%/ is established at absolute personnel decrease - to 98%. The greatest influence on the level of labour productivity in conventional-natural units exerts the continuous increase of share of processed production. During 1989, average for the country, 85.7% from the meat yield is processed into sausages, specialties, cut meat, ready-to-eat products, cans; ready and semiready-to-eat meals and lard. Significant part from these products is prepared in small cuts and packages for a trade network. Only 14.3% from the meat yield is realized as meat with bones for public catering. The continuous increase of labour productivity is one of the most significant objective law, governing the development of society. Therefore the revealing of conditions and factors, which determine this growth, is especially meaningful requirement. In order to increase labour productivity in the conditions of meat industry, the decisive role play: a) the mechanization and automatization rates of increase in processes of production; b) improvement of raw materials base; c) improvement of production and assortment structure of meat industry production; d) improvement of production organization, labour and management. From the conducted investigation on problems of labour productivity in PRB's meat industry, the following conclusions can be drawn: 1. A system of valuable, natural and labour parameters is presented. It gives a possibility for complex evaluation of labour productivity labour and dynamics for the particular enterprise, as well as for the whole subbranch. Some of parameters can be used successfully for international comparisons. 2. The revealing of reserves for labour productivity increase on every stage of meat industry development is a permanent problem of theory and practice.

#### REFERENCES:

- Broida, T.B. (1980) Economics bases of corporations and enterprises in meat industry. Ed. Pishtevaja promishlenost, Moscow.
- Valchev, T. and Tsachev, H. (1982) The brigade labour organization in meat industry. Ed. Hranitelna promishlenost,



Sofia.

- Kaligorov, H.S. (1988) Selforganization of industrial enterprises, Sofia.
- Tsachev, H.P. (1982) Labour productivity in meat industry. Ed. Hranitelna promishlenost, Sofia.