Chapter 8

THE ECONOMIC SIGNIFICANCE OF NATIONAL EDUCATION

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The work launched by the State Planning Commission on a ten-year plan for expanding the network of schools of the National Commissariat for Education, with a general view to reconstructing our national economy and with the particular aim of satisfying the needs of the country by improving the degree of skill of the labour force, has again presented us, though in a different guise, with the problem of the more important factors in the degree of skill of labour.

We had often carried out investigations into the statistical relation between these factors and education from 1918 onwards. But our early work was hampered by the insufficient amount of data relating to education and we were obliged to confine ourselves to the most elementary grouping of the material. Because of this, we could only establish the most prominent inter-dependencies between the factors to a first approximation.

Thus, for example, by comparing the degree of skill with age, length of service and education in turns with various groupings, we showed quite clearly that there is a very close relation between all the factors given and the degree of skill at some trade. But we were quite unable to establish the exact nature of this relation since the influence of each factor taken separately was complicated for our groupings by the concealed influence of the other factors, which remained unknown for any given group. If, for example, our trade returns were divided into groups according to increasing educational qualifications, in order to ascertain the corresponding increase in the degree of skill, we started from the assumption of ‘other things being equal’ with respect to the groups being compared for the degree of skill. However, this assumption was far from being

1 Translation of article in Ekonomiki Truda, 1925, by Barbara Jeffrey. This was one of the first attempts to analyse the economic effects of education. Because of its enduring interest it was included among the papers of the conference.
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universally valid, since groups of workers of different education are usually quite clearly differentiated as to age and length of service as well as a whole lot of other factors, the influence of which on the degree of skill was not even being studied.

Because of this, as soon as we were in a position to incorporate more data into our research, we decided to apply to it methods which make use of as detailed as possible combinations of the groups of the factors being studied.

I. MANUAL LABOUR AND SCHOOL EDUCATION

We had about 50,000 trade returns of Leningrad workers — from cross registration of members of the Metal Workers Trades Unions for 1919 — but we had neither the means nor any particular need to use them all.

By means of preliminary research into the stability of the indices under consideration, we established how much data had to be processed in order to be able to achieve the greatest possible accuracy in the results compatible with the nature of data and the needs of the investigation. When it turned out that it was only necessary to use about 2,000 to 3,000 samples from the trade groups we had chosen, we picked out about 2,600 of the most skilled workers in the returns for machine tool shops, i.e. mostly lathe, milling machine, planing machine, mortising machine, drill and other similar machine-tool operators. The degree of skill in our returns was fixed according to wages with a 12-category scale of wages. But the scale and particularly the rates for 1918–19 were not sufficiently good criteria of the degree of skill. The prewar evaluation of labour of different degrees of skill by fairly free competition on the labour market, it seemed, corresponded much more closely to the requirements of such a criterion. However, by comparing these evaluations for various trades just before the war with the wage classes of these trades in 1918–19, we established that, if the prewar evaluation of the degree of skill corresponding to the postwar 1st class is taken as unity, then we obtain an evaluation 2·6 times as great for the 9th class, 3·2 times as great for the 12th and so on. On a basis of these relations, it was not difficult for us to translate wage classes into these prewar evaluations of them. We called the unit of measure for the degree of skill corresponding to the degree of skill of a worker of the first wage class, a ‘labour unit’ or lu for short.¹

¹ Conversion from wage class to lu is carried out using the expression \( x = 1 + 0.2(n - 1) \) where \( x \) is the number of lus and \( n \) is the number of the class in the 12-class scale of workers.

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