

## The Use of the Utility Function of Labour to Assess the Formation of Human Resources

V.A. Gnevasheva

Department of Economics, Centre of Youth Sociology,  
 The Institute of Socio-Political Research under the Russian Academy of Sciences,  
 The Institute of Fundamental and Applied Studies,  
 Moscow University for the Humanities, Moskva, Russia

**Abstract:** This study dwells on personal and occupational orientations of young people as they approach their future career choices. The researcher studies a possibility of correlation between the most significant welfare factors and complex international indices of the quality of life. These interconnections form the basis of approaches to the analysis of the utility function of labour. The function is determined as useful for the assessment of professional identity in the formation of human resources. Besides, the article characterises the main factors of the utility function of labour using the results of the author’s monitoring study. It also specifies the notion of function in the context of people’s professional identity. Finally, the article outlines the areas of government regulation in the formation of human resources.

**Key words:** The utility function of labour, professional identity, social markers of welfare, monitoring, human

### INTRODUCTION

During the period from 2001-2012 the professional expectations and value orientations of students were analysed within the framework of the author’s monitoring study (The results drawn by the researcher within the framework of the following studies: the RHSF Grant No 12-42-93021 k, No 09-03-00821a/R, No 08-02-05503 e/R, No 08-03-04201 e/R, No 07-03-03201 e/R, No 06-03-03208e/I). The monitoring process took place all over Russia. The subject of this research is students studying at state and private educational institutions in Moscow and other regions. The geographical scope of the study covers all federal districts of Russia. The sampling of data used is multistage with the last stage formed by a representative cluster sample (a student group). Within the last seven years the total sample size has been 2150 respondents (2012); 2500 respondents (2011); 2300 respondents (2010); 2873 respondents (2009); 3262 respondents (2008); 1782 respondents (2007); 1129 respondents (2006) (Gnevasheva, 2010).

In this study, the occupational and value orientations of students are defined, first and foremost, using their answers to indirect questions, for instance, about the “criteria for the good life”. This approach is intended to attach importance to the student’s subjective social position in the context of their expectations regarding their life trajectories in the immediate future. The multiple choice format of a test which lets respondents select up

to five answers from a defined list of choices and formulate their opinion in a separate graph (in semi-closed-ended questions), gives quite a clear overview of general tendencies in people’s choice based on their values. During the study four criteria for the “good life” have been of the utmost priority among students, namely “wealth”, “a happy family”, “health” and “a good job”. The dynamics of changes in the students’ criteria for the “good life” from 2006 to 2012 is deemed stable, with an increase in values of dominant positions. Among them, there are ten positions that are of interest for researchers and needed by respondents (Table 1). It is possible to say that these ten indicators are markers of “happiness” as a complex category which includes elements of both personal and professional identity of young people establishing themselves as specialists and defining their professional expectations.

**Table 1: The choice of criteria for the good life typical of Russian students in 2004-2012 (most popular answers, %)**

	2006	2007	2008	2009	2010	2011	2012
To be wealthy	76.7	78.3	79.9	76.3	86.1	81.7	82.1
To have a good job	66.7	68.1	69.7	65.2	90.3	62.4	63.1
To have a happy family	70.8	70.4	71.7	71.7	91.9	75.8	76.9
To have power and a high status in society	16.2	14.8	16.5	17.8	33	16.3	16.6
To love and be loved	61.8	62.1	63.8	60.2	88.6	64.8	65.4
To be healthy	70.6	70.8	69.7	66.6	92.3	75.1	75.7
To have good education	17.7	28.5	23.1	24.6	73.5	20.57	21.2
To be independent and free	36.1	37.2	38.5	36.1	76.2	31.5	30.6
To care about others and then about oneself	6.7	5.2	4.5	4.5	8.1	6.9	6.9
To feel secure and protected	28.8	21.1	22.6	21.6	71.5	25.7	25.9

Table 2: Data of the OECD Better Life Index in Russia and data of the author's monitoring study among Russian students

Aspects of the OECD Better life index	The OECD data for Russia (indices)	Data of the author's monitoring study concerning the self-identification of Russian students (%)
Living conditions	5.9	82.1
Income	1.3	80.2
Work	5.8	63.1
Society	5.6	11.6
Education	6.0	21.2
Environment	4.2	18.5
Civil rights	2.2	53.7
Health	0.5	75.7
Satisfaction	3.0	65.4
Security	7.2	25.9
Work-life balance	8.5	31.5

**MATERIALS AND METHODS**

These criteria for the good life identified by young people and outlined in this monitoring study provide an opportunity to correlate these results with the Better Life Index by the Organisation for Economic Co-operation and Development (OECD).

By comparing the parameters of the OECD Better Life Index and the priority criteria for the good life drawn by students, it is possible to notice similar tendencies in the evaluation of dominant positions which, in the end, form the world view of society in the modern socio-economic environment. According to the OECD, Russian people are mainly satisfied with their work-life balance, security, the level of education in Russia, their work, society and environment. However, there are some factors that cause a high degree of dissatisfaction and anxiety among Russian citizens, for example, their income and health. Among the factors of better life in the context of personal and professional expectations of Russian people, "income" and "health" are considered to be most significant. These social markers indicate the need for the state and the public's attention to complex and goal-oriented socio-economic programmes designed to improve social well-being and satisfaction with the socio-economic situation in the country. We compared the factors analysed by the OECD for Russia and the results of our monitoring study (Table 2).

**RESULTS AND DISCUSSION**

We segmented the sample concerning the degree of fulfilment of people's expectations with regard to the level of their engagement in work processes and their self-actualisation among their colleagues. Also, there was an additional index providing an insight into the likelihood of the achievement of student's professional expectations in the light of existing professional identity

of Russian people. We analysed it by defining the function of their labour's utility on the basis of official statistics (Anonymous, 2013, 2014). The utility function of people's labour is a special case of general utility function that reflects the favourability of a situation for an individual or a group of individuals.

The maximisation of the utility function means that an individual is satisfied with a situation and the degree of this satisfaction is measured judging from the number of factors used for this evaluation, as well as their nature. So, the utility function used to evaluate the level of an individual's satisfaction with his/her occupation is a simple function dependent on two factors: the number of leisure hours and the amount of material goods purchased for the money earned (C):

$$U = f(C, l) \rightarrow \max \tag{1}$$

Samuelson (1983) tried to find a social welfare function that would be a vector of individual utility functions. Samuelson characterised a function of Wages (W) as "an ethical belief of all kind people". Each individual Utility function (Ui) depended on individual consumption and labour supply. In the context of welfare economics a situation is optimal if the Wages function (W) is specified (ordinal), i.e., can be determined in its (positive) monotonic transformation.

In order to analyse the current situation concerning people's satisfaction with the Russian labour market in terms of the fulfilment of consumer expectations, as well as their expectations of work process and its quality, we considered multiple regression that enabled us to determine the utility function of people's labour on the basis of the factors chosen (Table 3). The use of multiple regression analysis allows us to determine the utility function of labour on the basis of the table data:

$$Y = 13857.89 + 0.023 \times X_1 + 3.673 \times X_2 - 125.642 \times X_3 - 341.062 \times X_4 - 174.488 \times X_5 \tag{2}$$

Where:

- Y = Total labour input (million people/hours)
- X<sub>1</sub> = Average gross monthly salary (rubles)
- X<sub>2</sub> = Index of consumer confidence
- X<sub>3</sub> = Distribution of employed population by education level as percentage of total population, including people with a higher professional education degree
- X<sub>4</sub> = Work-related injuries (per 1000 people)
- X<sub>5</sub> = The average age of employed population (years old)

