# Formation of Management Model for Assessment the Economic Security of Individual Interests

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## ABSTRACT

In the conditions of reformatting and transformation of the world economy, as well as the aggravation of the international situation, there is an objective need to form a model for assessing the economic security of an individual, taking into account both economic factors and other aspects of social life.

As the **object** of article, the author considers relationships that influence the economic security of vital interests of the individual. The **subject** is indicators of its condition and performance on which its survival and sustainability depend, and **tasks** are to study the raw data for their formation. The **aim** of the article is to develop a model of economic security of the individual.

As a result, the author has formed a model of assessment of economic security of the person, which takes into account assessment of income, expenses, debt, property, family, education, as well as environmental impact, that is, not only its financial and economic situation, but also socio-cultural traits. The relevance of the study, conducted using logical and mathematical **methods** is due to the possibility of applying its results for the rapid identification of places of social tension and the adoption of the necessary measures, and to obtain information on the presence or absence of threats to a particular person's economic security in order to make certain management decisions.

*Keywords:* personality; economic security; multiple linear regression model; indicators of economic security; assessment of economic security of the individual

## INTRODUCTION

In the XX century in connection with the collapse of the USSR began the change of the economic system from administrative command to market: strong public administration replaced self–regulation to higher quality and fully satisfies the needs of society. At the same time, Russia's economy was being integrated into the global world market.

However, changes in the economic model have led to certain negative developments.

Structural features of the global market, as well as the cyclical development of the economy lead to negative trends and periods of recession, which carry risks for the Russian economy. In 2008–2009, 2014–2018, 2020–2021 there were world economic crises with significant consequences for our country and accompanied by a fall in the standard of living of the population and an increase of debt load.

Currently, the national economy of the Russian Federation is undergoing a period of reformatting and rapid transformation: in the context of changes in the situation over the past two years, under the influence of sanitary and epidemiological restrictions in 2020–2021 and international conflicts in 2021–2022, it intensifies crisis phenomena.

As a result, threats to the vital interests of society and the State, as well as individuals, are increasing. In view of the new realities, the problem assessment of economic security the specific facilities become relevant.

Based on their classically accepted levels of "personality–society–state", it is necessary to consider existing variants of objects taking into account the features, as well as to determine their main indicators that signal a critical change.

At the same time, both in conditions of a relatively stable environment and in times of economic turbulence, the individual's ability to counter economic threats is quite limited, since the latter are global in relation to the vital interests of the individual, they must therefore be confronted without government assistance — only entity with the full resources and possibility to counteract — a particular person is often unable. The Russian Federation was obviously attempts in the interests of society and individuals: as a result of a significant reduction in citizens' incomes, increased costs and debt burden, a series of measures are being implemented to implement social payments to the population, as well as to provide preferential credit facilities.

When the economic situation deteriorates, there is an objective need to assessment the economic security of the individual.

The relevance of this task is due to the possibility of timely diagnosis and identification of existing threats, as well as subsequent reaction and counteraction.

In the conditions of acceleration of social processes, and digitalization of various areas of social and economic life, there is an urgent question of the formation of tools to assessment the security interests of the facility at a particular time, monitor his condition for some time and also anticipate possible developments. In this regard, it is appropriate to create a model that relevant to this task using methods of correlation and regression analysis. And indicators to determine (based on income, expenditures, debts, as well as indicators not directly related to economic, but influencing their formation), influencing the level of protection of economic interests of the individual, by which this article means the condition of its economic interests, in which the possibility of occurrence of threats is minimized and which is described by specific indicators of the model, relevant ratings.

## LITERATURE REVIEW

The above problems are devoted to the works of domestic and foreign economists: the description of the person as an economic security object is given in the works D. Zapylenkova [1], O. Bank [2], Yu. Dubyagin, O. Dubyagina, E. Tsaturyan [3], E. Drobot, M. Vartanova [4], O. Kolotkina [5], K. Kurayan, A. Dagldian, K. Marchenko [6], E. Akimova [7]; the position of the individual on the basis of the postulates of the theory of the State and the law is considered in [8–11]; and security of the individual — in [12–13].

The concepts of "rate", "indicator", and "level" of economic security are currently debated, and in the studies describing them the author conventionally identifies two main groups: in some sources, the description of the economic security indicator is based on the condition of its definition as such [14] and, as a result, studying of a specific factor, in effect, means working with the calculated safety characteristic of the facility [15–16]. But there is another approach to the concept, which is the implementation of the results of research obtained in other areas of knowledge from economics and management [17–21].

It is possible to note separately the application of mathematical and econometric methods of research of economic systems and processes [22–24].

At present, the Russian Federation has established a significant regulatory framework for the legal status of the individual (*Table 1*). Thus, the legal status of the individual is governed by the provisions of the Civil Code of the Russian Federation[1] taking into account the requirements of special federal laws.

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[1] Civil Code of the Russian Federation No. 51 from 30.11.1994. Published in the Collection of Laws of the Russian Federation No. 32 from 05.12.1994, Chapter 3, art. 3301. URL: http://www.consultant.ru/document/cons_doc_LAW_5142/b8f17657382c206f564e8a7573b96a2bf2c210b3/

## RESEARCH

Given that the individual is considered to be the object of economic security, one must keep in mind that interest is an internal priority that drives it and thus determines its behavior. The latter, being subject to emotions, is not rational. In this connection, the concept of "personality" in terms of behavior and decision-making in the article is equated with the concept of "person".

At the same time, in some sources, personality (person) is viewed not only from the position of its biosocial essence, but also as integrated multi– dimensional and multi–level system with interrelated components: cosmological, social, spiritual–moral, psychological, etc. Each of the levels of the individual is formed as a result of its development, is linked to relevant elements of socio–natural and space systems and is in constant contact with them [25]. At the same time, the transition from the concept of "person" to the concept of "personality" implies consideration to a greater extent of socio–economic factors, since the determining factors are not natural, but only socially significant qualities — views, abilities, needs, interests, moral convictions.

The concept of "personality" is signifying the fact of the most complete separation of man from nature, enabling the relationship to it by a specific historical system of social relations.

As a personality, person does not relate to nature as its "body", but through the prism of the social attitudes of civil society, and scientists assume that human activity is purely pragmatic and individualistic [26]. The person acquires property and also earns money in the revenue–generating activities and spend it to meet its needs.

In order to determine the indicators (factors) that influence the level of economic security of the individual, it is necessary to

*Table 1*

**Normative legal acts regulating the legal situation of objects of economic security**

| No. | Normative legal act | Regulatory field |
|---|---|---|
| 1 | Constitution of the Russian Federation[a] | The rights and freedoms of man and citizen |
| 2 | Family Code of the Russian Federation[b] | Marital and family relations |
| 3 | Tax Code of the Russian Federation[c] | Tax relations |
| 4 | Labour Code of the Russian Federation[d] | Labour relations |
| 5 | Code of Administrative Offences of the Russian Federation[e] | Administrative responsibility |
| 6 | Housing Code of the Russian Federation[f] | Housing relations |
| 7 | Federal Law No.129 from 08.08.2001 "On State Registration of Legal Entities and Individual Entrepreneurs"[g] | Business regulation |
| 8 | Federal Law No. 127 from 26.10.2002 "On Insolvency (Bankruptcy)"[h] | Personal bankruptcy |
| 9 | Federal Law No. 115 from 25.07.2002 "On the Legal status of foreign citizens in the Russian Federation"[i] | Legal status of foreign nationals |
| 9 | Federal Law No. 273 from 29.12.2012 "On education in the Russian Federation"[j] | Education |
| 10 | Federal Law No. 125 from 26.09.1997 "On Freedom of Conscience and Religious Associations"[k] | Relations in the field of human and civil rights to freedom of conscience and freedom of religion |
| 11 | Law of the Russian Federation No. 3612-I from 09.10.1992 "The Fundamentals of the Legislation of the Russian Federation on Culture"[l] | Cultural relationship |

*Source:* developed by the author.

*Note:* a) URL: http://www.consultant.ru/document/ cons_doc_LAW_28399/; b) URL: cons_doc_LAW_8982/; c) URL: http://www.consultant.ru/document/cons_doc_LAW_19671/; d) URL: http://www.consultant.ru/document/ cons_doc_LAW_34683/; e) URL: http://www.consultant.ru/document/ cons_doc_LAW_34661/; f) URL: http://www.consultant.ru/document/ cons_doc_LAW_51057/ g) URL: http://www.consultant.ru/document/ cons_doc_LAW_32881/; h) URL: http://www.consultant.ru/document/ cons_doc_LAW_39331/ i) URL: http://www.consultant.ru/document/ cons_doc_LAW_37868/; j) URL: http://www.consultant.ru/document/ cons_doc_LAW_140174/; k) URL: http://www.consultant.ru/document/ cons_doc_LAW_16218/; l) URL: http://www.consultant.ru/document/cons_doc_LAW_1870/

refer to the main areas of knowledge that describe the behavior of the individual.

Internal and external stimuli that affect the behaviour of the person, i.e. what motivates the person to carry out a certain activity, are researched by psychologists and sociologists.

An analysis of the works of scientists on this issue shows that individuals act in pursuit of their individual interests arising from different needs. An example is the "pyramid of needs" A. Maslow [27], whose hierarchy assumes basic needs (e.g., food, water) as well as the need for safety. Failure to satisfy them results in loss of personality. When the needs of the next level (social) are not implied, this is not implied, but personality development becomes impossible.

The individual will always strive to meet the needs, giving priority to those that are most important to him at one time or another;
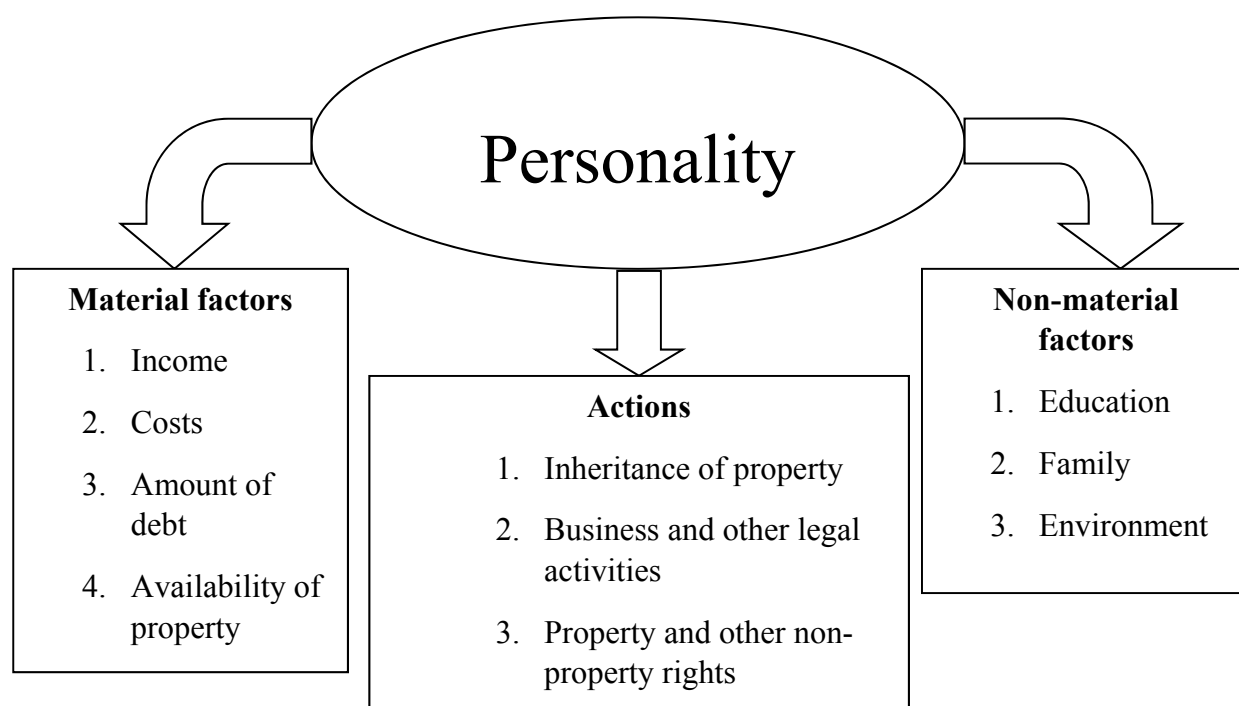
Personality

| Material factors | Actions | Non-material factors |

**Material factors**

1. Income
2. Costs
3. Amount of debt
4. Availability of property

**Actions**

1. Inheritance of property
2. Business and other legal activities
3. Property and other non-property rights

**Non-material factors**

1. Education
2. Family
3. Environment

*Fig.* **Factors affecting the level of economic security of the individual**

*Source:* compiled by the author.

but until the needs of the lower levels are met, higher levels will not be of interest to the individual.

Construction of a mathematical model of a phenomenon is possible on the basis of both *specific* indicators characterizing the object and *assessment* (i.e. defined criteria for certain assessments), which are used in this article.

It should be noted that threats to the economic interests of the individual are actually taken into account in the indicators and, consequently, in the estimates given. Therefore, the protection of its interests is implicit in the high values of the latter.

At the level of the individual, it is necessary to assess the factors affecting their situation. When investigating this issue, we will assume that a particular person lives in a certain territory, has some property, receives income and, with its help, over the life course, acquires a certain economic prosperity as a result of activities: business and other, not prohibited

by law, provided that the State recognizes its property and non–property rights.

The level of economic security of the person is influenced by factors that can be conditionally divided into tangible and intangible. Their change will affect her vital interests, including financial, "food" and other.

Tangible assume a "material" component of life, therefore imply the presence of income and property, in particular housing. At the same time, costs and total debt will have an impact.

From the point of view of the non–material component of the individual's life, which allows him to occupy a position in society and influences the level of wealth, the level of education, the presence and composition of the family, and the existence of a favorable environment.

It follows that the level of economic security can be determined on the basis of tangible and intangible factors, provided that the change in any of them threatens

**Input data and criteria for indicators of the model for assessing the economic security of the individual**

| Indicator | Value of classification |
|---|---|
| **Income ( $X_1$ )** | |
| 1 | Income to 10 000 rub. |
| 2 | Income from 10 000 to 20 000 rub. |
| 3 | Income from 20 000 to 30 000 rub. |
| 4 | Income from 30 000 to 40 000 rub. |
| 5 | Income from 40 000 to 50 000 rub. |
| 6 | Income from 50 000 to 60 000 rub. |
| 7 | Income from 60 000 to 70 000 rub. |
| 8 | Income from 70 000 to 80 000 rub. |
| 9 | Income from 80 000 to 90 000 rub. |
| 10 | Income from 90 000 to 100 000 rub. |
| **Costs ( $X_2$ )** | |
| 1 | Costs above 90 000 rub. |
| 2 | Costs from 80 000 to 90 000 rub. |
| 3 | Costs from 70 000 to 80 000 rub. |
| 4 | Costs from 60 000 to 70 000 rub. |
| 5 | Costs from 50 000 to 60 000 rub. |
| 6 | Costs from 40 000 to 50 000 rub. |
| 7 | Costs from 30 000 to 40 000 rub. |
| 8 | Costs from 20 000 to 30 000 rub. |
| 9 | Costs from 10 000 to 20 000 rub. |
| 10 | Costs to 10 000 руб. |
| **Debt burden ( $X_3$ )** | |
| 1 | Presence of long–term debts of more than ten annual incomes |
| 2 | Presence of short–term debts of more than one year |
| 3 | Presence of long–term debt more than one year income |
| 4 | Presence of short–term, long-term debts of more than half a year's income |
| 5 | Presence of long–term debts of more than monthly income |
| 6 | Presence of short–term debts of more than monthly income |
| 7 | Presence of short–term debts of less than monthly income |
| 8 | Presence of long–term * debts of less than monthly income |

| Indicator | Value of classification |
|---|---|
| 9 | Presence of debts of less than daily income |
| 10 | Absence of debts |
| **"Presence of asset" ( $X_4$ )\*\*** | |
| 1 | Presence of personal property |
| 2 | Presence of sub–housing either at a considerable distance in the absence of a vehicle or the absence of property |
| 3 | Presence of habitable but substandard housing far from the workplace with one vehicle per family |
| 4 | Presence of habitable but substandard housing, located near from work with one vehicle per family |
| 5 | Presence of low–quality and habitable housing located far from work or income – generating activities and one vehicle per family |
| 6 | Presence of low–quality and habitable housing located near from work or income – generating activities and one vehicle per family |
| 7 | Presence of high–quality and habitable housing located near from work or income – generating activities and one vehicle per family |
| 8 | Presence of quality and habitable housing, located near from work, or income – generating activities, and one or more vehicles per family |
| 9 | Presence of quality and habitable housing, located far from work, or income – generating activities, and one or more vehicles per family |
| 10 | Presence of quality and habitable housing located near the place of work or income–generating activity, several real estate units, and one or more vehicles per family |
| **Education ( $X_5$ )** | |
| 1 | Lack of education |
| 2 | Availability of primary education |
| 3 | Availability of secondary incomplete education |
| 4 | Availability of general secondary education |
| 5 | Availability of secondary special education |
| 6 | Availability of undergraduate education |
| 7 | Availability of higher education |
| 8 | Availability of several higher education institutions not used in professional activities |
| 9 | Availability of several higher education institutions used in professional activities |
| 10 | Availability of academic degrees considered in professional activity |
| **Family ( $X_6$ )** | |
| 1 | Presence of 1/2 minor and 1/2 young children, as well as several dependent persons, including in the absence of a spouse |
| 2 | Presence of two or more children and one dependent or two or more young children and in the absence of a spouse |

| Indicator | Value of classification |
|:---:|:---|
| 3 | Presence of 1/2 minors and 1/2 young children, 1/2 or more minor children and in the absence of a spouse |
| 4 | Presence of two or more young children or one young child and in the absence of a spouse |
| 5 | Presence of spouse and two or more minor children or one minor child and in the absence of a spouse |
| 6 | Presence of spouse and two or more dependent persons (except children) |
| 7 | Presence of spouse and one young child |
| 8 | Presence of spouse and one minor child |
| 9 | Presence of spouse and one dependent person (except children) |
| 10 | Presence of spouse without children and dependents |
| **Environment ( $X_7$ )** | |
| 1 | When living outside the town (lack of infrastructure) |
| 2 | In the presence of unfavorable natural conditions (remote, northern and highland areas) and unequipped infrastructure (village) |
| 3 | In the presence of relatively favorable natural conditions (temperate climate, lack of high mountain areas) and unequipped infrastructure (village) |
| 4 | In the presence of favorable natural conditions (mild climate, plain) and unequipped infrastructure (village) |
| 5 | In the presence of unfavorable natural conditions (remote, northern and highland areas) and relatively unequipped infrastructure (urban village, district center, village) |
| 6 | In the presence of relatively favorable natural conditions (temperate climate, flat terrain, no highland areas) and relatively unequipped infrastructure (urban village, district center, village) |
| 7 | In the presence of unfavorable natural conditions (remote, northern and highland areas) and developed infrastructure (regional center, city of more than 500 000 inhabitants) |
| 8 | In the presence of relatively favorable natural conditions (temperate climate, lack of high mountain areas) and developed infrastructure (regional center, city of more than 500 000 inhabitants) |
| 9 | In the presence of favorable natural conditions (mild climate, plain) and relatively developed infrastructure (urban village, district center, village) |
| 10 | In the presence of favorable natural conditions (mild climate, plain) and developed infrastructure (regional center, city of more than 500 000 inhabitants) |

*Source:* developed by the author.

*Note:* * — the maturity period for short-term debts is less than one year, long-term — more than one year;

** — the expenses incurred by the owner for the maintenance and maintenance of the property are taken into account when calculating $X_2$.

the possibility of survival and progressive development (see *Figure*).

In order to form a mathematical model of dependence on the existing factors of the general level of economic security of the individual, we shall designate their variables and set the limits of possible values (*Table 2*).

In order to form the final model, let's consider the $Y$ level of economic security of the individual and form a model of multiple

**Model for assessing the economic security of the individual based on an analysis of 1 020 observations**

| Variable | Rate | Standard error | *t*-statistics | *p*-value | Importance |
|---|---|---|---|---|---|
| Const | −8.40573e-011 | 2.72131e-012 | −30.89 | <0.0001 | Yes |
| $X_1$ | 0.142857 | 1.05916e-013 | 1.349e+012 | <0.0001 | Yes |
| $X_2$ | 0.142857 | 1.14075e-013 | 1.252e+012 | <0.0001 | Yes |
| $X_3$ | 0.142857 | 0.000000 | 1.564e+012 | <0.0001 | Yes |
| $X_4$ | 0.142857 | 1.01161e-013 | 1.412e+012 | <0.0001 | Yes |
| $X_5$ | 0.142857 | 1.07032e-013 | 1.335e+012 | <0.0001 | Yes |
| $X_6$ | 0.142857 | 0.000000 | 1.462e+012 | <0.0001 | Yes |
| $X_7$ | 0.142857 | 2.46182e-013 | 5.803e+011 | <0.0001 | Yes |
| Average value of dependent variable | 6.947059 | Standard deviation of a dependent variable | | | 0.872128 |
| Sum of squares of residues | 5.08e-21 | Standard model error | | | 2.24e-12 |
| R−square | 1.000000 | Corrected R−square | | | 1.000000 |

*Source:* developed by the author.

linear regression of assessment of economic security of the individual:

$$Y = const + X_1 + X_2 + X_3 + X_4 + X_5 + X_6 + X_7 + \varepsilon.$$

Based on calculations made for the maximum and minimum values of the independent variables given in the *Table 1*, maximum permissible value $X_{max} = 10,00$, and $X_{min} = 0,00$. Therefore, the maximum protection of the interests of the individual is possible when $X_n = 10$.

In the course of the research, the author modelled a system of indicators of economic security of a person during 85 years of life (1 020 months), and also 11, 20 and 30 years. In order to form private models, samples were considered, including 1 020 observations recording the level of economic security of the person once a month for 85 years; 180 observations (age period 18–33 years); 240 observations (age period 18–38 years); and also 360 observations (age period 18–48 years) with significant indicator, equal 0.01.

Results of the model research from 1 020 observations are shown in *Table 3*.

Based on the data of the *Table 3*, form a private model of assessment of economic security of the individual:

$$\widehat{Y} = -8,41*10^{-11} + 0,143*X_1 + 0,143*X_2 + 0,143*X_3 + 0,143*X_4 + 0,143*X_5 + 0,143*X_6 + 0,143*X_7.$$

Next, we learn about the model of assessment of the economic security based on 180 observations equivalent to 15 years of human life. As mentioned above, consider the age range 18–33 years as a sample (*Table 4*).

According to the *Table 4* form a private model of assessment of economic security of the individual:

$$\widehat{Y} = 2,45468*10^{-11} + 0,143*X_1 + 0,143*X_2 + 0,143*X_3 + 0,143*X_4 + 0,143*X_5 + 0,143*X_6 + 0,143*X_7.$$

**Model for assessing the economic security of individuals based on the analysis of 180 observations**

| Variable | Rate | Standard error | *t*-statistics | *p*-value | Importance |
|---|---|---|---|---|---|
| Const | 2.45468e-011 | 0.000000 | Not defined | Not defined | Yes |
| $X_1$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_2$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_3$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_4$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_5$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_6$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_7$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| Average value of dependent variable | 6.347619 | Standard deviation of a dependent variable | | | 0.211460 |
| Sum of squares of residues | 0.000000 | Standard model error | | | 0.000000 |
| $R$−square | 1.000000 | Corrected $R$−square | | | 1.000000 |

**Model for assessing the economic security of individuals based on the analysis of 240 observations**

| Variable | Rate | Standard error | *t*-statistics | *p*-value | Importance |
|---|---|---|---|---|---|
| Const | −1.42998e-011 | 0.000000 | Not defined | Not defined | Yes |
| $X_1$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_2$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_3$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_4$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_5$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_6$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| $X_7$ | 0.142857 | 0.000000 | Not defined | Not defined | Yes |
| Average value of dependent variable | 6.382143 | Standard deviation of a dependent variable | | | 0.195730 |
| Sum of squares of residues | 0.000000 | Standard model error | | | 0.000000 |
| $R$−square | 1.000000 | Corrected $R$−square | | | 1.000000 |

**Model for assessing the economic security of individuals based on the analysis of 360 observations**

| Variable | Rate | Standard error | *t*-statistics | *p*-value | Importance |
|---|---|---|---|---|---|
| Const | −4.55435e-012 | 2.51329e-012 | −1.812 | 0.0708 | No |
| $X_1$ | 0.142857 | 1.18734e-013 | 1.203e+012 | <0.0001 | Yes |
| $X_2$ | 0.142857 | 1.34168e-013 | 1.065e+012 | <0.0001 | Yes |
| $X_3$ | 0.142857 | 0.000000 | 2.067e+012 | <0.0001 | Yes |
| $X_4$ | 0.142857 | 0.000000 | 1.967e+012 | <0.0001 | Yes |
| $X_5$ | 0.142857 | 0.000000 | 1.609e+012 | <0.0001 | Yes |
| $X_6$ | 0.142857 | 0.000000 | 2.104e+012 | <0.0001 | Yes |
| $X_7$ | 0.142857 | 1.24418e-013 | 1.148e+012 | <0.0001 | Yes |
| Average value of dependent variable | 6.497619 | Standard deviation of a dependent variable | | | 0.238653 |
| Sum of squares of residues | 2.00e-22 | Standard model error | | | 7.53e-13 |
| $R$−square | 1.000000 | Corrected $R$−square | | | 1.000000 |

Now consider a similar model based on 240 observations (equivalent to 20 years of human life, selected age range 18–38 years). The results of the indicator analysis are reflected in *Table 5*.

Based on this data, we formed a private model:

$$\hat{Y} = -1{,}42998 * 10^{-11} + 0{,}143 * X_1 + 0{,}143 * X_2 + 0{,}143 * X_3 + \\ + 0{,}143 * X_4 + 0{,}143 * X_5 + 0{,}143 * X_6 + 0{,}143 * X_7.$$

Finally, to the latest model, based on 360 observations equivalent to 30 years of human life (taking the age range of 18–38 years) — see *Table 6*.

In this case, the private model for assessment of economic security of the individual is as follows:

$$\hat{Y} = -4{,}55435 * 10^{-12} + 0{,}143 * X_1 + 0{,}143 * X_2 + 0{,}143 * X_3 + \\ + 0{,}143 * X_4 + 0{,}143 * X_5 + 0{,}143 * X_6 + 0{,}143 * X_7.$$

The determination coefficient of the obtained private models shows that 100% of the research cases are described by the equations. All independent variables are significant; any change per unit results in a change of 0.143 assessment of economic security of the individual. The conclusion is as follows: because the values of the indicators in the model change slowly throughout life, the description of the level of economic security of the individual will be more accurate the longer the analysed period and the larger the sample of observations.

Thus, the method of analysis proposed by the author makes it possible to effectively record changes in the level of economic security of individual interests throughout life by analyzing different periods of his life. At the same time, the formation of private models gives the opportunity to build a mathematical forecast.

## DISCUSSION OF RESEARCH RESULTS

In the course of the study, private models for assessing the economic security of individuals were obtained and formed (for analyzing the size of the sample corresponding to a certain life period), effectively reviewing the level of economic security of the individual and

identifying threats to economic security of their vital interests.

Comparing the results with the views of other scientists who have studied this topic, the following should be noted: the author defines indicators of economic security as enabling individuals to develop progressively and independently at a particular time, based on the concept of "economic security" proposed by L. I. Abalkin [28], which is also consistent with the concept, given by S. N. Silvestrov, who notes that "the system of indicators for assessment of economic security should reflect knowledge of the state of the economy as a system, its spheres (subsystems), all major processes and relationships in the economy, ensuring its dynamic equilibrium and its ability to perform its functions to provide national interests in the foreseeable circumstances, and to allow for a more comprehensive assessment of the performance and management of the economy" [29].

M. A. Alabicheva considers the economic security of the individual in the structure of the economic security of the State, arguing that "the economic security of the individual is represented as the readiness and ability of the individual to form a vital level of self–protection and self–determination in the context of the establishment by the institutions of State power of such mechanisms of realization and protection of vital important interests of the individual, which can ensure balanced and sustainable development of the national economy and the State as a whole as a self–developing system" [30]. Due to the fact that the author of the research establishes vital interests of the individual taken for indicators of economic security, the question of the relationship of the personality with the state in the models proposed in the article is not disclosed.

E. V. Romanyuk is formed a factor model for assessing the protection of economic interests of the individual, taking into account only the issues of reproduction of the population. The model proposed by the author shows the relationships between variables, which allows to take into account the probability factor, as well as contains the minimum number of necessary indicators, which makes it, on the one hand, universal, and on the other hand, convenient for practical application [31].

I. A. Kuznetsov is studied consumer economic security as "the human condition and ability, under appropriate socio–economic conditions, to protect and exercise their natural right to a certain level of quality of life", states that "among the many factors characterizing the economic security of the consumer, the economic factor is the leading". At the same time, in the model developed by the author, the assumption is applied that in the process of living, a person acts irrationally, not guided by purely economic calculation, so the indicators of the model are present as tangible (economic)and intangible factors [32].

A. V. Grafov is used estimates, but suggests taking into account the different shares of some of them in the development of mathematical models [33]. The author does not take this circumstance into account because of the study of specific factors that affect the level of economic security, so he proceeded from the equal influence of all factors in the model.

## CONCLUSION

In the course of the research the article obtains a model of assessment of economic security, which takes into account both tangible and intangible factors, influencing the state of economic interests of the individual, which allows you to quickly

analyze the state of protection of interests both at a certain point in time and for a long period of time. The model has the advantage of assessing the relationship between its variables.

It identifies the equation of multiple linear regression, which is significant, as well as indicators that influence the overall assessment of economic security.

The results of the research can be applied by statistical services as well as personnel departments of enterprises to obtain information on the presence or absence of threats to the economic security of a particular person.

In addition, the author plans to use the results to conduct further research and to translate them into practice. Thus, such methods of analysis may be useful for assessing the protection of the economic interests of the society represented by the population of the region (municipal entity), either by employees of the enterprise or residents of the Russian Federation as a whole.

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