Research Article

# Necessity of Population Financial Attraction for the Social Policy Realization in the Health Care

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**ABSTRACT**:
The article shows that the state has been ineffective in implementing the objectives of the production of public goods in the absence of a competitive environment in a number of areas. In such circumstances, the importance of market mechanisms is obvious. To solve this problem is proposed through the development of the Institute of socially focused non-profit organizations with industry expertise.

**Keywords:** The expenditures of the Consolidated budget, health, primary morbidity, mortality, non-profit organizations.

## INTRODUCTION

Modern conditions of economic development demand from the state the active position in sectors where low efficiency of a market mechanism is observed. The market mechanism is not always effective for socially important benefits, for example, education, health care and culture. And though the most part of these benefits can be made in market space, however, the long-term nature of manifestation of their effects, and also considerable scale of external influence, cause inexpediency of the similar decision. So, it is almost impossible to make

contribution assessment of each individual to cumulative effect. In addition there is a problem with voluntary funding of these benefits and equivalent access to them of one and all segments of the population that practically with guarantee will generate social tension.

Besides, low efficiency of a market mechanism can be observed in the following situations:
- limitation of the competition owing to artificial or natural monopolization of any kind of activity. In that case sharply risks of decrease in use efficiency of limited resources increase;

- existence of outer effects because of which benefit or expenses can be shifted to the subjects not involved in their emergence. In society the conflicts of interests increasing social tension can result;

- the information asymmetry limiting access to full information on goods properties and services that does not allow to carry out the choice of alternative options, proceeding from criteria of use efficiency of economic resources.

However it must be kept in mind that in certain cases state mechanism can also show the inefficiency. This inefficiency is shown in inability of the state to provide optimum distribution of resources according to criteria of public welfare and society ideas of social justice. For example:

- information asymmetry and limitation of information, as well as in a case with a market mechanism, promotes adoption of inefficient decisions;

- the imperfection of political system mediated by contradictions between various groups of society does not allow to define precisely the development priorities suiting all;

- lack of a implementation possibility of complete control over activity of contractors of the state promotes inappropriate use of means of the state funds;

- lack of a implementation possibility of complete control over activity of state machinery generates excessive bureaucracy and corruption.

For the solution of the similar problems arising when granting the public benefits it is possible to use several ways [3]:

- with the state granting the public benefits in the necessary and legislatively fixed volume over which consumers should incur own expenses on payment of these services can be provided;

- also granting the public benefits can be carried out by the state within the funds raised during redistribution of primary income of the population, however, at the same time all resources will be distributed in certain parts between each member of society for their accumulation and the subsequent acquisition of certain benefits;

- besides, for granting the socially important benefits by the state the private sector can be attracted. Attraction of the private sector will provide competences both increase in the competition, at the same time and increase in efficiency of use of limited resources.

The last from the presented ways becomes more and more urgent when carrying out social policy. So, the increasing number of issues is resolved within social activity of the enterprises, political, trade-union public associations, the welfare and voluntary institutions realizing social policy in rather narrow limits. Implementation of complementary programs of social state regulation and programs of the enterprises, firms, other institutes of civil society promote increase in efficiency of social policy, its focus, targeting and flexibility. Thus, the mechanism of carrying out social policy is characterized by a variety of subjects, programs, their financial basis, methods and implementers.

**METHODS**
The methodological basis of work, first of all, is presented by requirements and the principles of system approach. It allowed to provide unity of a subject and research method, necessary and sufficient reliability of theoretical results, the revealed tendencies and practical recommendations which are contained in this article. As concrete main scientific receptions and methods of a research theoretical and analytical generalizations, the functional and structural analysis, the correlation and regression analysis, statistical groups, settlement and constructive, comparative and comparative methods, analytical graphics were applied.

**RESEARCH RESULTS**
**3.1 The analysis of the expenses of the Consolidated budget of the Russian Federation on health care**
Let's consider dynamics of expenses from the Consolidated budget on health care during the period from 2006 to 2015 (figure 1). So, the volume of expenses in this direction for the considered years in real terms increased by 36,2% and made 3,1 trillion rub. At the same time the total volume of expenses from the Consolidated budget of the Russian Federation

for the considered years increased slightly more – by 49,3%. In general, expenses on health care in structure of the Consolidated budget of the Russian Federation in 2015 occupied 10,5%.
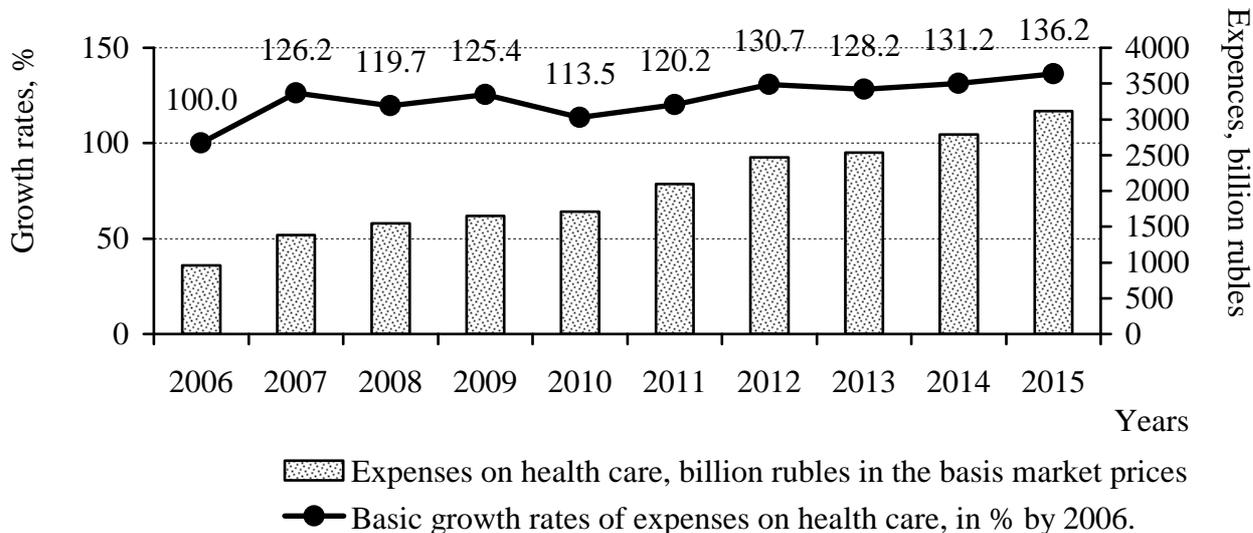


Figure 1. Dynamics of expenses of the Consolidated budget of the Russian Federation on health care during the period from 2006 to 2015, with adjustment on the rate of inflation (the chart is calculated and made by the author on the basis of data: The consolidated budget of the Russian Federation and budgets of state non-budgetary funds [An electronic resource]//Federal Treasury: official site of Federal Treasury. URL: http://www.roskazna.ru/ispolnenie-byudzhetov/konsolidirovannyj-byudzhet/ (date of the address: 15.12.2016)

The most part of these means – 2,1 trillion rub (71,9%) – was spent under article of other questions in the field of health care. 483,6 billion rubles (16,9%) were allocated for financing of stationary medical care. On financing of the out-patient help – 188,6 billion rubles (6,6%). On financing of the sanatorium and improving help – 53,7 billion rubles (1,9%).

Other part of means – 130,6 billion rubles (4,6%) – was distributed between the following directions: medical care in day hospitals of all types; emergency medical service; preparation, processing, storage and safety of donor blood and its components; sanitary and epidemiologic wellbeing; applied scientific research in the field of health care.
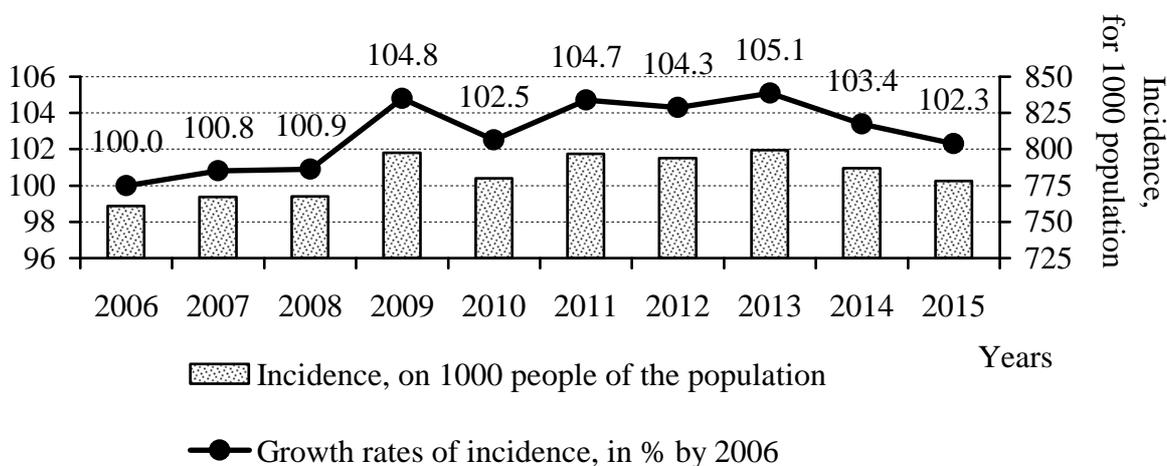


Figure 2. Dynamics of primary incidence of the population of the Russian Federation during the period from 2006 to 2015 (the chart is calculated and made by the author on the basis of data: Health care: incidence [An electronic resource]//Federal State Statistics Service: official site. URL:

ttp://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/healthcare/(date of the address: 15.12.2016))

At positive dynamics of size of the public expenditures on health care it is necessary to expect improvement of the socio-economic indexes connected directly with this sphere. It is represented that one of key indicators such is the level of primary incidence of the population. However in general this indicator showed negative dynamics (figure 2). So, from 2006 to 2015 primary incidence of the population increased by 2,3%, having reached the maximum values in 4,8%-5,1% in 2009-2013. Among the main reasons is primary incidence, 43,4% registered a case were the share of diseases of respiratory organs which total number increased by 14,2%. 9,5% of the general cases of primary incidence were the share of complications of pregnancy, childbirth and the postnatal period, and their number increased by 14,6%. 4,0% of the general cases of primary incidence were the share of diseases of the blood circulatory system, and their number increased by 17,7%. The number of initially revealed diseases of endocrine system and new growths increased by 13,7% and 15,2%, respectively.

Table 1 – Chain rates of a gain of primary incidence of the population and expenses of the Consolidated budget of the Russian Federation on health care, with adjustment on the rate of inflation, in % to previous year *

| Axis | Indicator | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|------|-----------|------|------|------|------|------|------|------|------|------|------|
| X | Expenses on health care | - | 26,2 | -5,1 | 4,8 | -9,5 | 5,8 | 8,8 | -2,0 | 2,3 | 3,8 |
| Y | Primary incidence of the population | - | 0,8 | 0,1 | 3,9 | -2,2 | 2,2 | -0,4 | 0,7 | -1,5 | -1,1 |

* the table is calculated and made by the author on the basis of data: The consolidated budget of the Russian Federation and budgets of state non-budgetary funds [An electronic resource]//Federal Treasury: official site of Federal Treasury. URL: http://www.roskazna.ru/ispolnenie-byudzhetov/konsolidirovannyj-byudzhet/ (date of the address: 15.12.2016); Health care: incidence [An electronic resource]//Federal State Statistics Service: official site. URL: ttp://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/healthcare/(date of the address: 15.12.2016).

Against the background of growth of the public expenditures on health care and ambiguous dynamics of primary incidence in the country, it is necessary to assume that these indicators are not connected with each other. For check of this hypothesis we will calculate correlation. Considering the fact that both rows have linear dynamics, between them false correlation can be established. To exclude this fact, correlation it is necessary to calculate loudspeakers [2] in sizes of chain increase of levels of ranks. Values of rates of a gain of primary incidence and expenses of the Consolidated budget on health care are presented in table 1. Price data are corrected on the rate of inflation and expressed in real terms the basic period.

**3.2 Calculation of linear coefficient of correlation**
It is necessary to make for calculation of coefficient of correlation previously assessment of distribution of values of indicators between which the interrelation, on the plane for the purpose of identification of abnormal deviations from average characteristics on population is established. The chart of dispersion (figure 3) on which on abscissa axis (X) values of a chain gain of expenses of the Consolidated budget on health care were postponed, and on ordinate axis (Y) – values of a chain gain of level of primary incidence was for this purpose constructed. The visual analysis of the chart does not allow to claim unambiguously about presence of any abnormal sizes which need to be excluded from the further analysis.
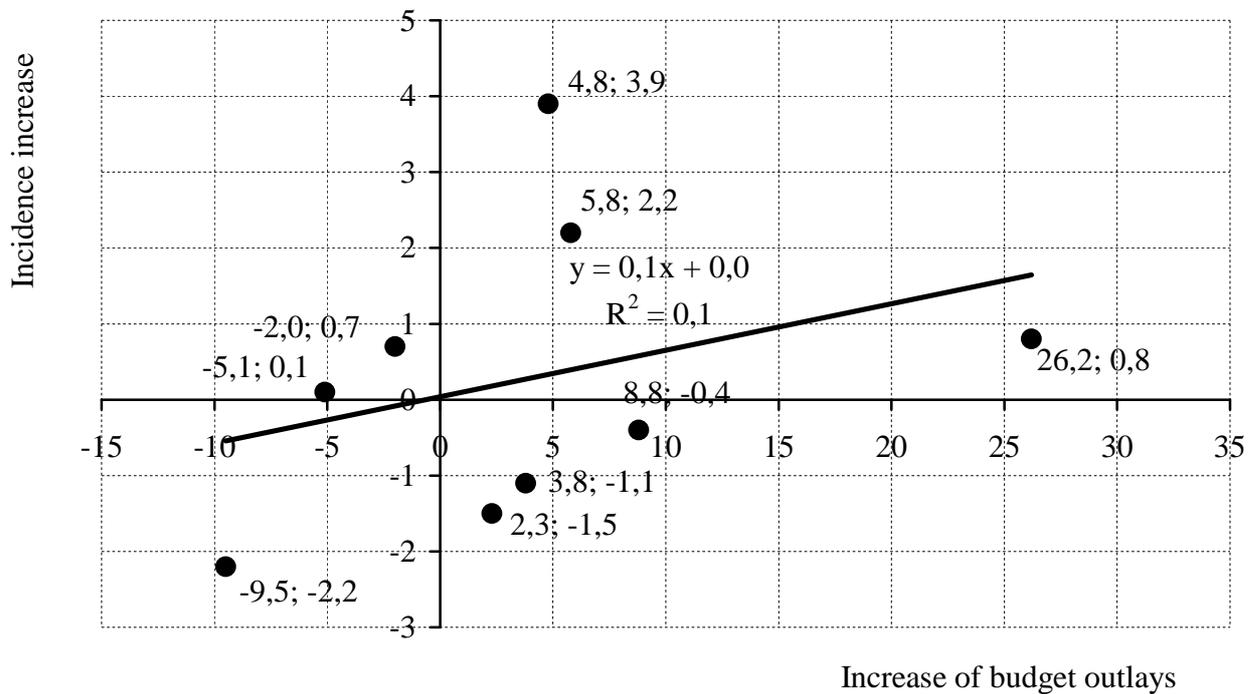
**Figure 3.** The chart of dispersion reflecting communication between indicators of chain rates of a gain of primary incidence of the population and expenses of the Consolidated budget of the Russian Federation on health care during the period from 2006 to 2015 (the chart is calculated and made by the author on the basis of data: table 1)

On the basis of the remained set of values we will calculate linear coefficient of correlation. Calculation of linear coefficient of correlation is performed on a formula

$$r_{x,y} = \frac{\sum (x-\overline{x})(y-\overline{y})}{\sqrt{\sum (x-\overline{x})^2 \sum (y-\overline{y})^2}}$$

, where:

- $x$ – the factorial sign mediating values of an indicator of chain rates of a gain of expenses of the Consolidated budget on health care;

- $\overline{x}$ – average value of values set of a factorial sign $x$;

- $y$ – the resultant sign which is hypothetically depending on a factorial sign, mediating values of an indicator of chain rates of a gain of level of primary incidence;

- $\overline{y}$ – average value of values set of a resultant sign $y$ [4].

For direct calculation we will use means of the tabular Microsoft Excel editor, the KORREL function. This function returns value of linear coefficient of correlation between two ranges of cells

$$r_{x,y} = 0,3$$

which contain values of the studied indicators. As a result we will receive that . This value allows to characterize interrelation as weak. I.e. between chain rates of a gain of level of primary incidence and expenses of the Consolidated budget on social policy it is possible to observe only very weak communication.
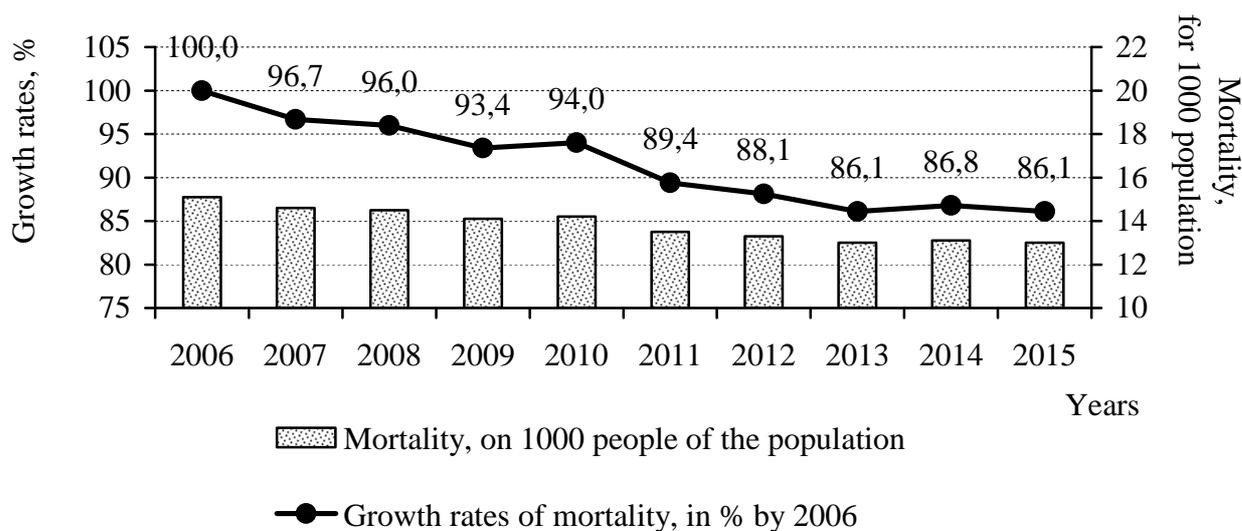
**Figure 4.** Dynamics of mortality of the population of the Russian Federation during the period from 2006 to 2015 (the chart is calculated and made by the author on the basis of data: Demography: natural movement of the population [An electronic resource]//Federal State Statistics Service: official site. URL: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/demography/ (date of the address: 15.12.2016))

And this communication has direct character. Therefore, it was in certain cases possible to observe a gain of primary incidence against the background of a gain of budget outlays. In other words, sometimes it is possible to observe increase in primary incidence against the background of increase in public financing of health sector. Nevertheless, the characteristic of this communication is so weak that you should not speak about it, how about statistically significant fact. Therefore, the hypothesis of lack of obvious communication made earlier between incidence of the population and the public expenditures on health care is confirmed. Other not less important indicator characterizing results of the state activity in health sector are indicators of mortality of the population. So, from 2006 to 2015 mortality of the population was reduced by 13,9% – from 15,1 to 13,0 cases on 1000 people of the population. The main number of death (57,4%) in 2015 were the share of blood circulatory system diseases. Also considerable number of death (18,5%) were the share of new growths. 11,0% were the share of the external reasons of mortality. On a disease of digestive organs, diseases of respiratory organs, some infectious and parasitic diseases – from 2,1 to 6,3%% cases from total number of death.

**Table 2** – Chain rates of a gain of mortality of the population and expenses of the Consolidated budget of the Russian Federation on health care, with adjustment on the rate of inflation, in % to previous year *

| Axis | Indicator | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| X | Expenses on health care | - | 26,2 | -5,1 | 4,8 | -9,5 | 5,8 | 8,8 | -2,0 | 2,3 | 3,8 |
| Y | Primary incidence of the population | - | -3,3 | -0,7 | -2,8 | 0,7 | -4,9 | -1,5 | -2,3 | 0,8 | -0,8 |

* the table is calculated and made by the author on the basis of data: The consolidated budget of the Russian Federation and budgets of state non-budgetary funds [An electronic resource]//Federal Treasury: official site of Federal Treasury. URL: http://www.roskazna.ru/ispolnenie-byudzhetov/konsolidirovannyj-byudzhet/ (date of the address: 15.12.2016); Demography: natural movement of the population [An electronic resource]//Federal State Statistics Service: official site. URL: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population/demography/ (date of the address: 15.12.2016)

Reduction of mortality of the population, the event against the background of increase in the public expenditures at health care, allow to make a hypothesis concerning finding of dynamics of mortality of

the population in inverse relation from expenses of the Consolidated budget of the Russian Federation on health care. For confirmation or a denial of this hypothesis we will expect correlation, how it was done above. Considering the fact that both rows have linear dynamics, between them false correlation can be established. To exclude this fact, correlation it is necessary to calculate loudspeakers [2] in sizes of chain increase of levels of ranks. Values of rates of a gain of the real income of the population and expenses of the Consolidated budget on social policy are presented in table 1. Price data are corrected on the rate of inflation and expressed in real terms the basic period.
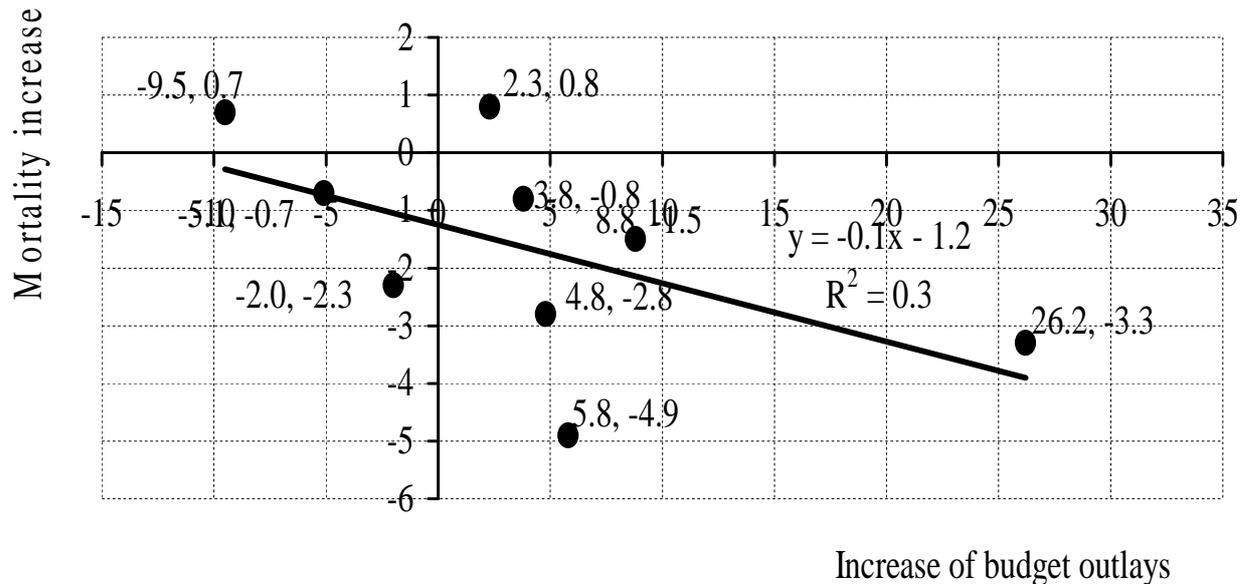


**Figure 5.** The chart of dispersion reflecting communication between indicators of chain rates of a gain of mortality of the population and expenses of the Consolidated budget of the Russian Federation on health care during the period from 2006 to 2015 (the chart is calculated and made by the author on the basis of data: table 1)

It is necessary to make for calculation of coefficient of correlation previously assessment of distribution of values of indicators between which the interrelation, on the plane for the purpose of identification of abnormal deviations from average characteristics on population is established. The chart of dispersion (figure 5) on which on abscissa axis (X) values of a chain gain of expenses of the Consolidated budget on health care were postponed, and on ordinate axis (Y) – values of a chain gain of a mortality rate of the population was for this purpose constructed. The visual analysis of the chart does not allow to claim unambiguously about presence of any abnormal sizes which need to be excluded from the further analysis. On the basis of the remained set of values we will calculate linear coefficient of correlation. For direct calculation we will use means of the tabular Microsoft Excel editor, the KORREL function.

$$r_{x,y} = -0{,}6$$

As a result we will receive that . This value allows to characterize interrelation as average negative. I.e. between chain rates of a gain of mortality of the population and expenses of the Consolidated budget of the Russian Federation on health care it is possible to observe negative in the direction and communication, average on reliability. What confirms the hypothesis made earlier.

## DISCUSSION

In conditions when the state shows the inefficiency in realization of a problem of production of the public benefits because of lack of the competitive environment in a number of spheres, relevance is acquired by market mechanisms. However simple transfer of a part of the state functions in the field of public sector

to the private sector for a number of the objective reasons is impossible since first of all it is about socially important activities of the modern state which fundamental doctrine is providing worthy conditions of activity of all members of society. Development of institute of the social directed non-state non-profit organizations having branch competence allows to solve this problem. For example, they have to be engaged in granting the social character defined like medical, educational or other services. At the same time they have to rely on the market principles of functioning, that is their work should not depend directly on the standards of financing and planned targets for providing a certain number of any services established by the state as it occurs [1, 5, 7, 8, 9] now. At the same time the social and economic efficiency which is shown in a resulting effect of their activity – recovery of health and satisfaction of consumers has to be key criterion for evaluation of their activity.

## CONCLUSIONS AND RECOMMENDATIONS

Development of this institute can be carried out within the concept of providing paid socially important services most of which known example is the health care system in the USA [6]. It will allow to develop most effectively the competition between the social directed non-state non-profit organizations at the same time and to increase quality of services, having in passing reduced their cost. However It should be noted that unlike the organization of a health care system in the USA, our state should not remove from itself financial liabilities. The state still has to remain the main source of financing of the socially important benefits.

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