Narzillo Istamovich Rustamov
a researcher of Macroeconomics Department of Tashkent
State University of Economics

SECTION 31. Economic research, finance, innovation, risk management.

INCREASING OF ECONOMIC EFFICIENCY AT INDUSTRIAL ENTERPRISES AS A FACTOR OF GROWTH EMPLOYEES` SOCIAL LEVEL

Abstract: *This article examines the issues of increasing the economic efficiency of industrial enterprises. The author has revealed that industry is precisely the high potential of innovations and new combinations of knowledge in industry in comparison with other sectors of the economy. This leads to labor productivity and increased production, which leads to an economic increase in the economic efficiency of industrial enterprises is a key factor in the growth of the social level of workers. Although improving the profitability of industrial enterprises is seen as a source of improving living standards, the author has studied other ways to improve the living standards of workers. The author formed the theoretical grounds and target setting of the research - the development of new approaches to the study of factors affecting the increase in the social level of workers. Through econometric analyzes, the process associated with raising the standard of living of the population based on the economic efficiency of industrial enterprises has been studied. Factors were chosen: factors of efficiency of industrial enterprises, changes in operating income due to changes in the productivity of industrial enterprises, changes in the efficiency of the government by changing the efficiency of industrial enterprises and changing the standard of living by changing the incomes of employees.*

Key words: *standard of living, labor efficiency, labor costs, labor incentives, resources, labor productivity.*
Language: *English*
Citation: Rustamov NI (2018) INCREASING OF ECONOMIC EFFICIENCY AT INDUSTRIAL ENTERPRISES AS A FACTOR OF GROWTH EMPLOYEES` SOCIAL LEVEL. ISJ Theoretical & Applied Science, 04 (60): 268-274.
Soi: http://s-o-i.org/1.1/TAS-04-60-49   *Doi*: crossref https://dx.doi.org/10.15863/TAS.2018.04.60.49

Introduction

The economies of countries are the main industries that provide growth, with a high degree of ability to use a new combination of innovation and knowledge relative to other sectors of the economy. This ensures the productivity of the industry and the accelerated development of production.

Today, the transition from the industrial economy to the knowledge economy in developed countries is a tendency for many to shift the capitals and labor-intensive industries into the developing countries of the world. In developing countries, the main factor of the industrial production is labor. This implies the need to study the effectiveness of industrial enterprises in relation to their working standards and living standards.

Literature review

Economic research indicates that the most important driving force for industrial and economic growth [1]. These views in the research are explained by the high potential of innovations and new combinations of knowledge in industry, compared to other sectors of the economy. This leads to labor productivity and increased production, resulting in economic growth [2].

The industrial sector plays an important role in creating jobs. In particular, the creation of a single workplace in the processing industry leads to the creation of two or three jobs in other industries [3].

According to research, the increase in the level of wages is directly linked to the structural changes in the path of industrialization, which greatly contributes to the growth of the population's income [4].

In low-income countries, low-tech industry-driven industrial sectors (clothing, textile manufacturing) support sustainable growth of employment, leading to increased incomes of the population. In medium-income countries, the

development of medium-sized industrial sectors (non-ferrous metallurgy and metal products) does not create a large number of jobs, but ensures high labor productivity [5].

Improving the quality of life of the industry and the development of technology used in it affects the knowledge and knowledge of the population. The fact that the processing of industrial enterprises from the center of the country to the remote regions accelerates the localization of production and increases the incomes of the population living in remote areas of the country [6].

The dynamics of the industrial sector also have a significant impact on the development of other industries and sectors. In particular, the development of industry's food and light industry sectors will stimulate the development of agriculture, forestry and fisheries.

Economic efficiency is an objective law of industrial sector development. Increasing the efficiency of industrial enterprises requires increasing the production volumes, improving the quality, saving resources, reducing additional costs and increasing production.

Increasing the efficiency of industrial production is a sign of the law of increasing productivity. The law of increasing the efficiency of production is a law that reflects the increasing influence of factors contributing to the growth of labor productivity in society as a whole [7].

Russian scientist N.L. Zaitsev describes productivity as a ratio of the results of economic activity of industrial enterprises to living and working labor cost, and indicates that the efficiency of production is expressed through both individual and common indicators. It incorporates indicators such as labor productivity, labor productivity, and individual performance indicators [8].

"Efficiency is characterized by its effectiveness, which is reflected in the wellbeing of the people of the country. Productivity can be determined by optimal use of resources compared to the needs of society. " [9]

It is important to examine the linkages between labor productivity and wage in improving the living standard of employers based on the efficiency of industrial enterprises. Theories on the relation between labor productivity and wages in industrial enterprises have been studied by many scientists [10].

One of the industries that contributed to the development of the Uzbek economy was industry. This sector of the economy has a high potential, which produces the necessary products to meet the needs of the population, creating a great many new jobs in the industry, and a great potential for improving the livelihoods of the population [11].

Economist from Uzbekistan A.T. According to Yusupov, "the economic performance can be characterized by the following indicators:" Increased productivity due to increased labor productivity, increased productivity, progressive structural shifts, regional coefficient and others "[12].

In I.I.Iskandandarov's opinion, in determining the effectiveness of industrial production it is necessary to use "a final, finalized system of indicators that performs the function of generalizing the whole reality" [13].

Q.X. Abdurakhmanov said, "It is necessary to study the level of livelihood and how to deal with consumer relations" [14].

Research Methodology

While increasing the cost-effectiveness of industrial enterprises is seen as a source of increased living standards, it has been studied ways to improve the living standard of the employer. [14].

The process, related to the improvement of the living standards of the population based on the cost-effectiveness of industrial enterprises, has been studied in four main areas: mathematically defined:

Line 1 - factors of effectiveness of industrial enterprises (this is determined by y1).

Line 2 - Changes in operating income due to changes in productivity of industrial enterprises (y2).

Route 3 - Change in effectiveness of the government by the change in the efficiency of industrial enterprises (y3).

Route 4 - Changes in living standards by changing employee income (y4).

This process will continue to rotate continuously. As you know, these directions have an interconnected relationship and can be expressed in the form of a multifunctional function:

$$Y = F(x_1, x_2, x_3, x_4 \ldots); \qquad (1)$$

Taking into account that many variables are involved and implemented in the above directions, the total Y function is represented as a sum of four functions:

$$Y = y_1 + y_2 + y_3 + y_4 ; \qquad (2)$$

here: Y- the function of changing the standard of living on the basis of economic efficiency of industrial enterprises;

y_1 - Functional change in labor productivity at industrial enterprises;

y_2 – salary change function in industrial enterprises;

y_3 - the effect of the government's ability to change as a result of the change in the efficiency of industrial enterprises;

y_4 – functional changeover function.

Changes in the labor productivity in the 1st direction of improving the living standards of industrial workers on the basis of cost-effectiveness can be summarized as (y1):

$$y_1 = \frac{\Delta Q}{\Delta L} ; \qquad (3)$$

THOMSON REUTERS
Indexed in Thomson Reuters

here:

y_1 - Functional change in labor productivity at industrial enterprises;

ΔQ – change in industrial production output;

ΔL – Changes in the number of industrial enterprises.

Changes in labor productivity in industrial enterprises have an impact on wages, and the functional change in industrial enterprises (y_2) is characterized by the following:

$$y_2 = k_1 \cdot \Delta W ; \qquad (4)$$

here:

y_2 – function of salary change in industrial enterprises;

k_1 – the ratio of wages to labor productivity.

ΔW - wage change;

k_1 The coefficient is determined by the following formula:

$$\Delta W = k_1 \frac{\Delta Q}{\Delta L_1} ;$$

from here:

$$k_1 = \Delta W \frac{\Delta L}{\Delta Q} ; \qquad (5)$$

Changes in productivity, productivity and wage rates of industrial enterprises also have a bearing upon the benefits that the state can take. That is, as stated earlier, after the change in the total volume of industrial enterprises (), the state will change the tax on production of industrial enterprises. Also, as a result of labor productivity and wage change, the state's income taxes on physical entities also change. Let us describe this by using the (y_3) function:

$$y_3 = k_2 \Delta Q + k_3 \Delta W ; \qquad (6)$$

here:

y_3 - Effect of change in effectiveness of the state due to changes in the efficiency of industrial enterprises;

κ_2 – the tax ratio depends on the volume of production;

κ_3 - the ratio of wages to tax evasion.

κ_2 The coefficient is calculated as follows:

$$k_2 = \frac{S^M}{Q} \qquad (7)$$

here:

S^M - tax on production of industrial enterprises;

κ_3 The coefficient is calculated as follows:

$$k_3 = \frac{S^u}{W} \qquad (8)$$

here:

S^u - wages of workers in industrial enterprises;

With the change in economic efficiency in industrial enterprises, we have examined the salaries of employees and the various taxes levied by the state. As a result, the general public incomes of the population will change, on the one hand, the change in wages will have a direct impact on the change in the general incomes of the population, on the other hand, as a result of changes in the state budget, the amount of social contributions paid by the state will also change, which will have an indirect effect on the change in the general incomes of the population. This process is represented by the function y_4:

$$y_4 = \kappa_4 \cdot (k_2 \Delta Q + k_3 \Delta W) + \kappa_5 \cdot \Delta T \qquad (9)$$

here:

y_4 – population income change function;

κ_4 – ratio of incomes of the population to business activity;

κ_5 – the ratio of incomes of the population to tranffer pay;

ΔT - change in transfer fees.

κ_4 The coefficient is calculated as follows:

$$k_4 = \frac{W}{DI} \qquad (10)$$

here:

DI - total incomes of the population.

κ_5 – The coefficient is calculated as follows:

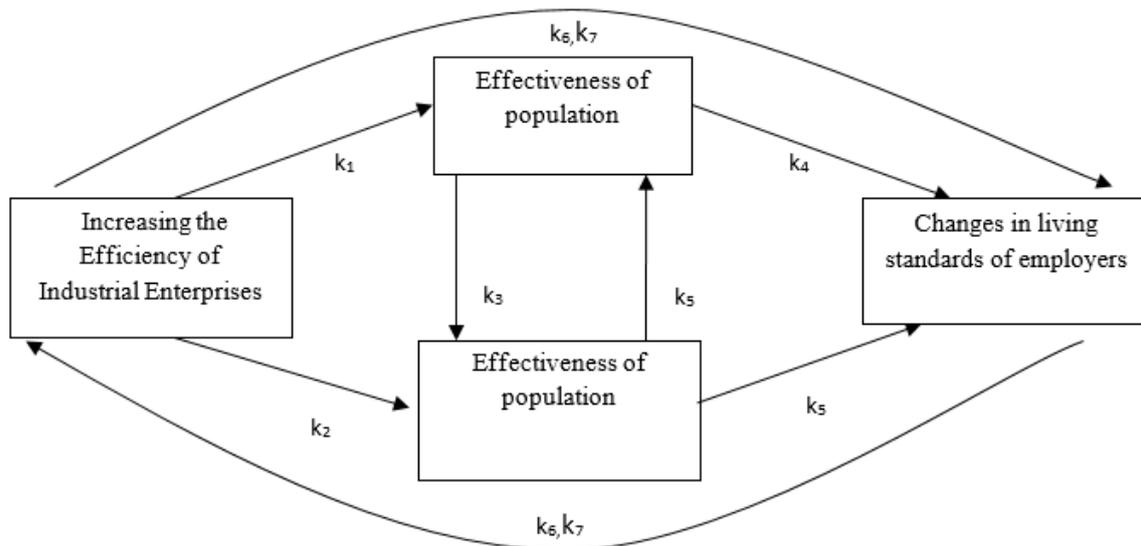$$k_5 = \frac{T}{DI} \qquad (11)$$

Thus, the general function of the change in the living standards of workers based on the efficiency of industrial enterprises can be expressed as follows:

$$Y = y_1 + y_2 + y_3 + y_4 = \frac{\Delta Q}{\Delta L} + k_1 \Delta W +$$
$$(k_2 \Delta Q + k_3 \Delta W) + (\kappa_4 \cdot (k_2 \Delta Q + k_3 \Delta W) +$$
$$\kappa_5 \cdot \Delta T) \qquad (12)$$

This is a continuous rotation movement process that is interpreted as a rotation mechanism (Figure 1):

Picture 1. Mechanism of rotational linkages of industrial enterprises' efficiency and increasing living standards.

Analysis and results

Changes in the values of the above-mentioned coefficients and functions on the basis of industrial production, industrial workers, industrial workers, average wage rates, transfer payments, and other data were studied and evaluated using economic-mathematical methods and econometric models (Tables 1 and 2).

Table-1

Years	Q (billion UZS)	L (thous. pers.)	W (billion UZS)	T (thous. UZS)	k1	k2	k3	k4	k5
2000	1888,9	1145,0	166,3	88,944	-	0,12	33,26	0,073	38,95
2001	2830,8	1160,0	248,3	130,908	1,31	0,11	49,66	0,069	36,30
2002	4494,0	1186,0	365,8	173,136	1,84	0,1	73,16	0,070	33,32
2003	6127,5	1223,0	478,0	210,792	2,54	0,1	95,6	0,074	32,48
2004	8123,2	1284,0	577,7	265,200	3,05	0,1	115,54	0,075	34,43
2005	11028,6	1348,0	714,4	380,532	3,01	0,13	142,88	0,073	39,11
2006	14640,3	1402,0	945,6	514,296	3,46	0,13	189,12	0,073	39,70
2007	18447,6	1446,0	1307,4	807,036	4,18	0,1	261,48	0,077	47,83
2008	23848,0	1487,0	1798,8	1225,008	3,73	0,08	359,76	0,079	53,51
2009	28387,3	1513,0	2147,1	1639,656	1,99	0,08	429,42	0,070	53,13
2010	38119,0	1605,7	2767,7	2063,028	5,91	0,07	553,54	0,058	43,30
2011	47587,1	1640,7	3477,7	2621,700	2,62	0,06	695,54	0,056	41,89
2012	57552,5	1669,5	4356,8	3288,156	2,54	0,05	871,36	0,056	42,44
2013	70634,8	1703,1	5427,6	3969,228	2,75	0,05	1085,52	0,057	41,49
2014	84011,6	1736,5	6420,7	4852,140	2,48	0,05	1284,14	0,058	44,02
2015	97598,2	1768,7	7494,0	5258,820	2,54	0,05	1498,8	0,061	42,75
2016	118869,4	1802,4	8431,0	5930,760	1,48	0,05	1686,2	0,058	40,79
2017	144185,3	1825,2	8834,3	6737,616	0,36	0,05	1766,86	0,047	36,18

Table -2

Years	ΔQ (billion UZS)	ΔL (thous. pers.)	ΔW (billion UZS)	ΔT (thous. UZS)	y1	y2	y3	y4
2000	-	-	-	-	-	-	-	-
2001	941,9	15	82	41,964	62,79	107,08	4175,729	1523615
2002	1663,2	26	117,5	42,228	63,97	215,83	8762,62	1407561
2003	1633,5	37	112,2	37,656	44,15	285,15	10889,67	1223775
2004	1995,7	61	99,7	54,408	32,72	303,83	11718,91	1874216
2005	2905,4	64	136,7	115,332	45,40	411,63	19909,4	4512647
2006	3611,7	54	231,2	133,764	66,88	799,20	44194,07	5313517
2007	3807,3	44	361,8	292,740	86,53	1512,77	94984,19	14009702
2008	5400,4	41	491,4	417,972	131,72	1833,28	177218,1	22377912
2009	4539,3	26	348,3	414,648	174,59	694,85	149930,1	22039971
2010	9731,7	92,7	620,6	423,372	104,98	3668,72	344208,1	18351998
2011	9468,1	35	710	558,672	270,52	1863,47	494401,5	23428312
2012	9965,4	28,8	879,1	666,456	346,02	2233,44	766510,8	28330588
2013	13082,3	33,6	1070,8	681,072	389,35	2944,91	1163029	28321026
2014	13376,8	33,4	993,1	882,912	400,50	2462,52	1275948	38944070
2015	13586,6	32,2	1073,3	406,680	421,94	2730,16	1609341	17483204
2016	21271,2	33,7	937	671,940	631,19	1390,97	1581033	27500943
2017	25315,9	22,8	403,3	806,856	1110,3	146,49	713840,4	29223540

Based on the data in Table 1, the relationship between the productive capacity of the industry and the labor productivity of workers is as follows (Fig.2)
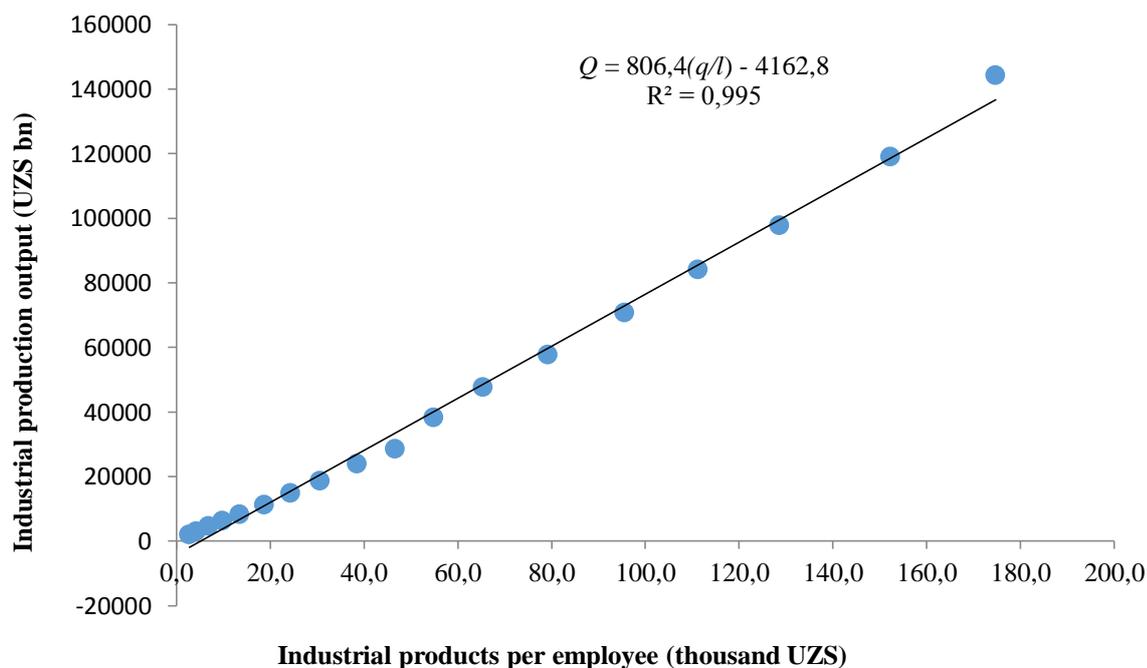

$$Q = 806{,}4(q/l) - 4162{,}8$$
$$R^2 = 0{,}995$$

Fig. 2. The function of the product's capacity and productivity dependence on the industry

After determining the transformation of the abovementioned functions and coefficients, prognostication of the volume of output produced in the industry has occurred (Fig.3)
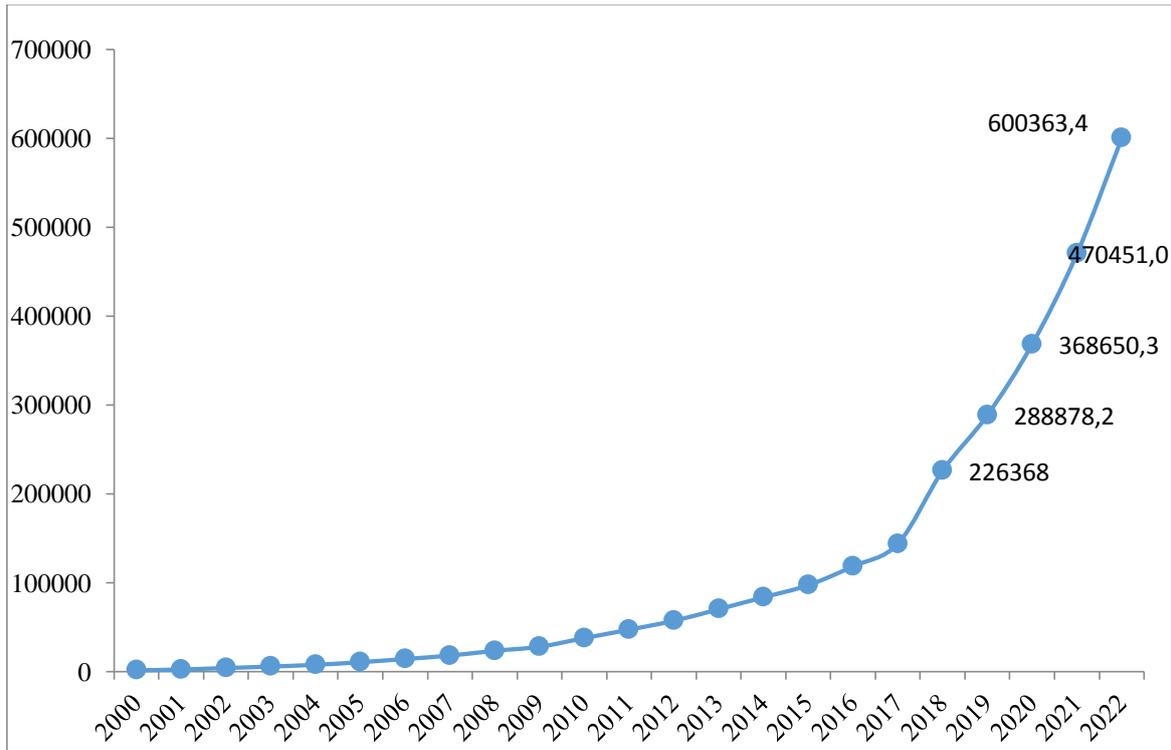
Fig. 3. Productivity trends in the industrial sector

Conclusion

Summary, the expression of the function of improving the quality of life of working people on the basis of cost-effectiveness of industrial enterprises as a whole process has demonstrated the principles of change of organizers of this process. This affects the impact of productivity change on industrial enterprises on the change in the indicators of living and workforce. Thus, the development of the industrial sector, the implementation of any country-wide measures to increase the cost-effectiveness of industrial enterprises, ultimately, will improve the productivity of workers and improve their living standards.

References:

1. Lall, S., (2000). Technological Change and Industrialization in the Asian Newly Industrializing Economies: Achievements and Challenges. In: Technology, Learning and Innovation: Experiences of Newly Industrializing Economies, eds. Kim, L. and Nelson, R.R., Cambridge: Cambridge University Press;
2. Szirmai, A., and Verspagen, B., (2011). Manufacturing and Economic Growth in Developing Countries, 1950-2005. UNU-MERIT Working Paper Series 2011-069. Maastricht, The Netherlands: United Nations University, Maastricht Economic and Social Research Institute on Innovation and Technology;
3. Lavopa, A., and Szirmai, A., (2012). Industrialization, Employment and Poverty, UNU-MERIT Working Paper Series 2012-081. Maastricht, The Netherlands: United Nations University, Maastricht Economic and Social Research Institute on Innovation and Technology.
4. (2016) UNIDO. Industrial Development Report 2016. Sustaining Employment Growth: The

Role of Manufacturing and Structural Change. Vienna, Austria. 2013. http://www. unido.org.

5. McMillan, M., and Rodrik, D., (2011). Globalization, Structural Change and Productivity Growth. In Making Globalization Socially Sustainable, eds. Bacchetta, M., and Jansen, M. Geneva: International Labour Office and World Trade Organization;

6. Szirmai, A., Naudé, W., and Alcorta, L., (2013). Introduction and Overview: The Past, Present and Future of Industrialization. In Pathways to Industrialization in the Twenty-First Century: New Challenges and Emerging Paradigms, eds. Szirmai, A., Naudé, W., and Alcorta, L. Oxford, UK: Oxford University Press.

7. Vidyapina V.I. (2006) Efficiency of the national economy. /IN AND. Vidyapina .- M., 2006-p. 32.

8. Zaitsev. N.L. (2008) Economics of an industrial enterprise - M .: Infra M, 2008. p. 284.

9. Bazylev NI, Gurko SP Economic theory. / NI Bazylev - M., 2004. p.13

10. Genkin B.M. (2007) Economics and sociology of labor. - Moscow: Norma, 2007, p. 284.

11. Ortykov A. (2004) Sanoat iqtisodiyoti.-T .: O`zbekiston yozuvchilar uyushmasi. Adabyti nashiri, 2004 - 18 p.

12. Yusupov A.T. (1991) Development and placement of production of consumer goods in Uzbekistan. - T .: Meunat, 1991. p. 38.

13. Iskandandarov I.I., et al. (1995) Increasing production efficiency in new management concepts - T: TUIT, 1995 -336 p.

14. Abdurakhmonov Q.X., et al. (2004) Social Security of the Population. Textbook. -T: "Literary Fund of the Union of Writers of Uzbekistan", 2004, p. 74 p.

15. Rustamov N.I. (2013) Evaluating the impact of industrial enterprises on the living standards of the population. Monograph. -T .: FAN 2013, - 192 p.

THOMSON REUTERS
Indexed in Thomson Reuters