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SOCIAL AND LABOR RELATIONS AND SUSTAINABLE SAFETY OF SINGLE INDUSTRY TOWNS

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Abstract

Authors substantiate the analysis of social and labor relations in single industry municipalities and define the characteristic features of such relations in town forming enterprises. We consider the statistics of single industry towns in Russia, as well as comparison of unemployment rates in Russian single industry cities with a similar indicator in the European Union. We introduce the notions of social and economic relations sustainability and the sustainable safety of social and economic relations. The article determines some threats to such safety in a single industry town as based on its substructures. Authors determine the indicators for assess the sustainable safety of social and labor relations of single industry towns and social and labor relations of city-forming enterprises. We present a comparative study of sustainable safety in polyindustrial and monoindustrial economies and propose a method to assess the sustainable safety of social and economic relations at town forming enterprises in single industry towns.We describe the four blocks in the proposed methodology: the methodical block, the analytical block, the forecast block and the target analysis.

Keywords: Single industry town (SIT); town forming enterprise (TFE); social and economic relations; sustainable safety.

1. Introduction

Results of various studies showed that material values are being replaced by sustainability, healthy life style, environmental safety, personal development, spiritual enhancement, harmonious relationships and a satisfying job (Smil, 2003; Gnevasheva, 2013).

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In April 2012, during the 66th Session of the UN General assembly, the international conference "Defining a New Economic Paradigm: The Report of the High-Level Meeting on Wellbeing and Happiness" was held. The issues of a new economic paradigm based on the parity and indivisibility of the three pillars of sustainable development: social, economic and environmental wellbeing together defining gross global happiness, were discussed (UN, 2012).

Nowadays, the social orientation of economy and societal relations mainly depend on social and labor relations (SLRs). They define the quality of life and wellbeing. But some characteristic features of social and labor relations at town forming enterprises (TFE SLRs) and social and labor relations in single industry towns (SIT SLRs), such as shortage of resources, call for a narrower and deeper research.

Today, there are some 319 SITs in Russia, as stated by the Decree of the Federal Government of the Russian Federation,№ 668-pof April 16, 2015. The list includes municipalities with a city or town status and constant populations of more than 3,000 people; besides, 20% of the workforce should be employed at the TFE.

Recent survey data (Monitoring, 2015) show that as of July 1, 2015, 13.6 million people lived in single industry towns, which is 9.3 % of Russian population. Workforce accounted for 5.8 million people (or 43 %) out of whom 969,400 (16.6 %) people worked at TFEs, 1.5 million people (25 %) worked in SMEs (including sole proprietors). It should be noted that employment in Russian single industry towns is much lower than in G7 countries, which is 68.6 % (OECD, 2015a). Data shows that SMEs are less developed in Russian single industry towns than in EU, USA and Japan, where SMEs account for more than 50 % of the employed population. As of January 1, 2016, in some 206 SITs in Russia, the level of unemployment exceeded the national average of 5.8 %, and in 84 SITs, the level was twice as high as the average.

Nevertheless, unemployment is significantly lower than that, for instance, in the EU which was 10.2% in 2015 (OECD, 2015b). In 101 SITs, the total prospective lay off of TFEs is some 18,400 people. The decline in purchasing power and investment has a negative impact on the TFEs which results in labor market crises in SITs.

Narrow specialization of SITs puts them in the risk zone, so the Russian government made it a strategic priority to cut down the number of SITs and enhance their economic structures and resource opportunities (Sanzhiev, 2016).

This speaks of the importance of the research in happiness and wellbeing as well as scarce resources of SITs in close conjunction with assessment of their SLRs and sustainable safety.

2. Problem statement

The aim of this paper is to design a method to assess the sustainable safety of social and labor relations of TFEs and SITs.

The object of study is the social and labor relations in TFEs and SITs.

The subject of study is the factors and methods to ensure the sustainable safety of social and labor relations of TFEs and SITs.

Social and labor relations in SITs are specific as compared to poly-industrial economies (table 1); thus, it is necessary to ensure not only the safety but also sustainable safety of social and labor relations there.

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Table 1. Characteristics of social and labor relations in SITs

Subsystem	Characteristics of SLR
Social sub-system(social and labor aspect)	1) TFEhasasignificanteffectontheaveragepayintheSIT; 2) Low labor market diversification (workforce is mainly employed at the TFE), hence workforce is limited; 3) Low work mobility; 4) CommunalutilityserviceinfrastructuredependsontheTFE; 5) Lowbusinessactivity(shortage of SMEs)
Technical sub-system (social and industrial aspect)	1) TFE's investment policy affects the asset modernization; 2) Adverse environmental effects of the TFE; 3) Health of the SIT's population depends on labor safety at the TFE; 4) TFEdeterminestheprofessionallevelofthepopulationandservesasource of socialization.
Institutional sub-system(organization and economic aspect)	1) The SIT's budget revenues depend on the managerial efficiency at the TFE; 2) Social responsibility of the TFE is a core component of SIT's labor market; 3) Underdeveloped social partnership

In this paper, we define the following types of sustainable safety: sustainable safety of social and labor relations at town-forming enterprises (TFESLRSS), sustainable safety of social and labor relations in single industry towns (SIT SLR SS), sustainable safety of social and labor relations in a poly-industrial economy (poly-industrial economy SLR SS) and sustainable safety of the TFE SLR-SIT SLR system.

SLRSS in poly-industrial and mono-industrial economies differ in certain characteristics; thus, the methods of analysis should be specific as well (Table 3). A mono-industrial economy has a monopsonic and limited labor market so SLRSS is mainly consistent with that of the TFE.

Table 2. Sustainable safety of SLR in mono-industrial and poly-industrial economies: comparison

Sustainability criterion	**Poly-industrial economy**	**SIT**
1. Risk of sustainability loss due to crisis	Moderate and low risk	High risk
2.Number of enterprises	Sustainability depends on a number of enterprises in various industries	Sustainable activity of one or more TFEs belonging to a certain industry is the main resulting factor of SIT's sustainability
3. Social sphere	Moderate risks of crises	High risks of social crises and unemployment in case of a crisis at the TFE
4. Sources of revenue	A possibility of broadening the source structure of the budget	Budget revenue growth is limited
5. SLR dependency	SLR sustainability is defined by the SLR at various enterprises	SLR sustainability is mainly defined by the TFE SLR
6. Pay roll formation	Free market mechanisms of payroll formation owing to its flexibility and adaptiveness	Non-free market mechanisms of payroll formation at the TFE hence high risk of sustainability loss

We can view SLR SS as:

1. The process of ensuring sustainability in an array of components such as conditions and factors facilitating dynamic sustainability.

2. The result and the indicator of sustainable SLR in SITs (may vary in levels: high, medium, moderate and minimal).

The SLR at TFEs, on the one hand, is an indispensable condition of SIT sustainability which provides for social stability, human resource development, wellbeing and stable economic growth. On the other

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hand, the social and labor sphere is an object of sustainable development thus TFE SLR management is important.

The framework of ensuring the sustainability of the TFE SLR-SIT SLR system is as follows:

1. The fundament of the TFESLR–SITSLR sustainability is the TFE SLR sustainability. It is characterized by SLR oriented towards personal safety and growth in its variety facilitating long term balance of all TFE SLR subjects.

2. The next level is the sustainable development of the SIT SLR. It is characterized by the state, tendencies and growth conditions of the SLR, oriented towards personal safety and growth in its variety facilitating long-term development of human potential and high living standard in the SIT.

3. The highest level is the sustainable SLR development of the TFESLR–SITSLR system defined as conditions and tendencies of social and labor relations change facilitating personal growth by means of efficient social partnership and social responsibility in the long term and implying the possibility of the directed qualitative change with system's integrity intact.

Besides, all levels of system's sustainability contain social, institutional and technical subsystems.

To prevent the sustainability loss in SITs, it is important to describe the threats to SLR in times of economic crises, decline of TFE's financial stability and the effects of monopsonic labor market:

1. Threats from the social subsystem: threats related to monopsonic labor market; threats of life quality decline due to instabilities at the TFE; threats of purchasing power; threats of layoffs or forced vacations due to a decline in production at the TFEs.

2. Threats from the technical subsystem: threats of workforce migration and subsequent shortage of labor; threats of labor safety decline; professional and competence threats; ecological threats for population.

3. Threats from the institutional subsystem: threats related to under developed social partnership as SITs lack labor unions and the TFE has a substantial impact on the labor market; threats related to insufficient support of the social sphere and SMEs; threats related to the lack of social responsibility at the TFE and other enterprises in the SIT, especially during a crisis; threats related to low financial stability, inefficient resource allocation and TFE management.

SLRSS needs management and, thus, it needs to be measurable. So the main methodological aim of this paper is to define criteria of SLR SS assessment.

All indicators of SLRSS assessment (Table 3) are to be classified in three groups each of which includes three basic subsystems of SLR (social, technical and institutional): 1. Indicators of TFE SLR; 2. Indicators of SIT SLR; 3. Indicators of social responsibility and social partnership (Porter, Kramer, 2006).

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Table 3. Indicators of TFE SLR and SIT SLR sustainable safety

Subsystem	Content	Indicators
Social	Preserving the potential of people as consumers of goods and services incremental for human resource development	1. Personal income: average pay at all enterprises including the TFE, the share of TFE in the aggregated pay. 2. Education level – the share of workforce with university or college level degrees. 3. Employment: the level of employment, including the share of TFE employed workforce, unemployment level. 4. SMEs: share of people employed at SMEs, the number and turnover of SMEs per capita. 5. Social responsibility of enterprises and social partnership: social income per capita, share of workforce employed in the legal domain of social partnership, share of socially oriented businesses. 6. Share of social infrastructure objects in TFE's assets.
Technical	Preserving the potential of people as employees	1. Work conditions: share of industrial employees working in unfavorable conditions (%) relatively all industrial employees; people employed in heavy work (%) relatively all industrial workers; number of work related health problems; number of work related accidents. 2. Human resource instability: turnover of employees, partial employment, vacated employees, layoffs, in percentage relatively average staff. 3. Professional and competence level: the share of employees retrained every year. 4. TFE's investments: to modernize assets, to improve work conditions, to save the environment, to support the SIT and social infrastructure.
Institutional	Preserving the potential of people as socialized persons	1. Efficient operations and financial stability of the TFE. 2. Social programs and other social expenditures of the TFE. 3. Cooperation of social, public and private enterprises. 4. Government's efforts to boost corporate social responsibility, social partnership and to increase the quality of life by means of programs in social development, SMEs support and motivations for socially responsible businesses etc.

Apart from the aforementioned indicators, control over the following ones is also necessary in SITs: the share of TFE in the gross municipal product of the SIT, the share of municipal workforce employed at the TFE, the share of TFE in the municipal tax revenues, the share of TFE pay in the aggregated municipal pay, the share of social infrastructure objects on the TFE's balance sheet, the share of TFE in the aggregated investment in developing human capital and asset modernization in the SIT.

These indicators need to be assessed because sustainable safety of the TFE SLR-SIT SLR system needs to lessen the impact of the TFE and to diversify the employment structure and the economy of the SIT as a whole.

3. Methods

To avert the threats to SITSLR sustainable safety in a timely manner, an effective system of monitoring is needed, which could include the fore mentioned indicators and would be based on the method to assess the sustainable safety of social and economic relations at town forming enterprises in single industry towns, designed by the authors (Method) (Roshina, & Artukhova, 2016).

The Method will allow us to:

1. Instantly assess the sustainable safety of the social and labor relations based on the main indicators.
2. Detect weak subsystems and their elements which need prioritized treatment.
3. Conduct a full assessment of the weak subsystems and their elements.
4. Monitor and forecast the sustainable safety of the social and labor relations in TFEs and SITs.
5. Check SIT's strategic documents for their correspondence to the SLR sustainable safety requirement.

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6. Assess the internal resources necessary for raising the SIR sustainable safety.

The Method is aimed at finding intercomplimentarity between the social and labor relations in TFEs and SITs, which is attained by assessing the focal indicators both at TFEs and in SITs.

The proposed Method also helps to assess the level of sustainable safety both in general and by elements (safety, sustainability and sustainable safety). This is important as a favorable result in one of the elements can distort the bigger picture. Thus, we need to examine all the subsystems of the weak element (social, technical and institutional). Only such selective reaction will allow for timely problem solving and identification of further weak spots in program documents and policies.

The Method consists of the following blocks (Roshina, & Artukhova, 2016):

1) a methodological part, containing the information on data collecting, forecasting and calculating methods;
2) an analytical part, implying instant and full assessment of sustainability level;
3) a forecasting part, suggesting an ability of forecasting the indicator in terms of local specifics;
4) purpose-oriented analysis, which refers to testing town forming enterprises and single industry towns' strategic documents correspondence to the criteria of social and labor relations sustainability.

4. Results

The result will be the range of SS levels necessary for management purposes:

1) A high level of SLR sustainable safety. It is characterized by optimal values of all indicators witnessing higher diversification of SIT's economy and lower dependence of the TFE. In such case, strategic documents need no correction. The management of SITs is done according to previously set procedures and deadlines.
2) A moderately unsustainable level of SLR safety. There is a significant drop in indicators characterizing several vital spheres. This stage is characterized by negative dynamics in development which threatens sustainability. Corrections in a number of strategic documents are needed.
3) Unsustainable safety. It is characterized by a significant decline in most SLR subsystems of a SIT which results in faulty interaction of system's parameters. If continued in the same manner, control over the system can be lost. All main strategic policies should be revised and changed.

5. Conclusion

Thus, the Method of sustainable safety assessment proposed by the authors will allow us to not only monitor the current state of the parameters but also to solve possible problem in a timely manner, including the problems related to resource shortage of the SITs. The method will also help to define the ways to ensure sustainable safety of the SLR, juxtapose current results of their functioning with strategic documents and correct them if necessary providing for human wellbeing and possible future resource growth.

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References

Gnevasheva, V. (2013). The Welfare of Society or the "Economics of Happiness": the Features of Interpretation for Contemporary Russia. *Knowledge. Understanding. Skill.*, *5*. Retrieved from http://www.zpu-journal.ru/e-zpu/2013/5/Gnevasheva_Economics-of-Happiness

OECD (2015, August). Entrepreneurship at a Glance 2015. Paris. OECD. Retrieved from http://dx.doi.org/10.1787/entrepreneur_aag-2015-en

OECD (2015, July). OECD Employment Outlook 2015, Paris. OECD. Retrieved from http://dx.doi.org/10.1787/empl_outlook-2015-en

Porter, M. & Kramer, M. (2007). Strategy and Society: the Link between Competitive Advantage and Corporate Social Responsibility-Response. *Harvard Business Review, 85(6), 136-137*.

Roshina, I. & Artyukhova N. (2016). A method of assessment of sustainability of social and labor relations of a city-forming enterprise and a single-industry town. *SHS Web of Conferences,* 28, DOI:10.1051/shsconf/20162801010.

Roshina, I. & Artyukhova, N. (2016). Methodical approach to assessing sustainable development of social and labor relations of single-industry cities. *ACSR-Advances in Computer Science Research, 51*, 435-438.

Sanzhiev, D. (2016). The list of single industry towns is growing due to Priority Social and Economic Development Areas. *Economics and life, 38* (9654). Retrieved from https://www.eg-online.ru/article/325181/

Smil, V. (2003). Energy at the Crossroads: Global Perspectives and Uncertainties. MIT Press.

The Russian Government. (2015, September) Monitoring of Single Industry Towns. Retrieved from http://government.ru/orders/19717/

United Nations General Assembly. (2012, July). International Day of Happiness. 66/281. Retrieved from http://www.un.org/en/ga/search/view_doc.asp?symbol=%20A/RES/66/281