St. Petersburg University
Graduate School of Management
Master in Public Management Program

THE ROLE OF CORPORATE SOCIAL RESPONSIBILITY IN SINGLE-INDUSTRY TOWNS DEVELOPMENT: THE CASE OF RUSAL

Master's Thesis by the 2nd year student
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St. Petersburg
2017

ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ

Я, Парфирьева Валентина Сергеевна, студент второго курса магистратуры направления «Государственное и муниципальное управление», заявляю, что в моей магистерской диссертации на тему «Роль корпоративной социальной ответственности в развитии моногородов (на примере компании «Русал»)», представленной в службу обеспечения программ магистратуры для последующей передачи в государственную аттестационную комиссию для публичной защиты, не содержится элементов плагиата.

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Описание цели, задач и основных результатов	Целью исследования стало определение направлений реализации стратегии корпоративной социальной ответственности (КСО) градообразующих предприятий, способствующей развитию моногородов. Для достижения поставленной цели были проанализированы особенности моногородов и факторы их развития. На основании полученных данных была построена регрессионная модель, определяющая приоритетные направления применения КСО, позволяющие градоообразующему предприятию способствовать городскому развитию. Эмпирическое исследование основано на панельных данных за 2011-2015 года по 7 моногородам РУСАЛа. На основании полученных результатов были определены следующие приоритетные направления развития КСО в моногородах на примере компании РУСАЛ: найм людей, которые долгое время находятся без работы; помощь в миграции и развитие малого и среднего предпринимательства.
Ключевые слова	Моногорода, корпоративная социальная ответственность, градообразующее предприятие, социальные программы

ABSTRACT

Master Student's Name	Parfireva Valentina
Master Thesis Title	The Role of Corporate Social Responsibility in Single-Industry Towns Development: the Case of Rusal
Faculty	Graduate School of Management
Main field of study	Public Management
Year	2017
Academic Advisor's Name	Ekaterina V. Sokolova
Description of the goal, tasks and main results	The goal of the study is to identify the directions of town-forming enterprise's corporate social responsibility (CSR) strategy, which can lead to the development of single-industry towns. The main characteristics of single-industry towns were examined along with the factors contributing to their development. The directions of CSR implementation were identified by means of regression analysis. The data for the empirical research is a set of socio-economic indicators, describing 7 single-industry towns, in which RUSAL planted itself as a town-forming company. Based on the results of the study, the following suggestions concerning CSR in single-industry towns are offered: to employ those people who have been unemployed for a long time, to support migration between RUSAL towns and to support small and medium enterprises.
Keywords	Single-industry towns, corporate social responsibility, town-forming enterprise, social programs

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INTRODUCTION

"Single-industry town" is a new term, appeared in economic terminology recently. Based on the Russian experience, the single-industry town can be compared to the term "city-plant" which is used internationally. The term "city-plant" reflects the basic idea of the concept, which relates to the tough interconnection between the plant and the population.

A significant number of single-industry towns appeared in the first half of the twentieth century, the period of industrialization of states. As the planned economy collapsed, many single-industry towns faced serious problems that prevented them from further development. Now there are 313 single-industry towns in Russia and most of them have serious socio-economical problems. These problems lead to the situation when single-industry towns can not develop independently and hamper the development of the regions as a whole.

In 2014 the Russian government paid attention to this problem and developed a program for improving the socio-economic conditions in single-industry towns. However, at a present, the program is considered being ineffective because the role of town-forming enterprise is strongly underestimated. Most studies on single-industry towns also downplay the role of town-forming enterprise while arguing that solutions to single-industry towns' problems must come from the state. The paper assumes that town-forming enterprise also should boost the development of the city, and, in case of success, the enterprise will also benefit. The development of the city can be held on the basis of corporate social responsibility (CSR) programs. This paper considers the role of CSR in single-industry town's development.

Research problem and objectives

The 313 single-industry towns in the Russian Federation represent only 10% of the total population of the country. Many of them have serious social and economic problems, which are, high unemployment, population outflow, budget funds shortage. The governmental intervention is not enough to solve these problems.

The *aim of the thesis is* to fill the gap in theoretical and applied knowledge in field of application of CSR programs for the urban development in single-industry towns. After an extensive literature review across leading academic sources, it can be concluded that solutions to the problems of single-industry towns might be solved at least partly by the town-forming enterprise.

This research has *a goal* to identify the directions of town-forming enterprise's corporate social responsibility (CSR) strategy, which can lead to the development of single-industry towns.

In order to reach the goal, it is important to fulfil the following research *objectives*:

- Determine the role and incentives of the town-forming enterprise in the development of single-industry cities.

- Analyse existing classifications of single-industry towns.
- Analyse existing CSR programs of RUSAL.
- Select indicators that have the greatest impact on the dynamic development of a single-industry town.

Research methodology and organization of the study

The paper is based on empirical study, which uses data collected from ROSSTAT, Marketline and EBSCO databases. To test the hypothesis, regression analysis will be used. The study is organized in the following way. First, the definition of single-industry towns, the main stages of single-industry town's emergence, their classifications and problems. Second, the role of CSR in the single-industry town's development is examined. Third, the regression analysis to test hypothesis is used. The main conclusions are formulated in the last paragraph.

CHAPTER 1. PECULIARITIES OF SINGLE-INDUSTRY TOWNS

1.1. Single-industry towns

1.1.1. Definition and the main characteristics of single-industry towns

Nowadays there is a discussion in the Russian scientific community about the feasibility of the formal status of a single-industry town, despite the fact that the population of single-industry towns is 13.5 million, or 9.4% of the total population of the Russian Federation [Report of the Minister of Economic Development.., 2014].

The concept of "industry town" in modern economic literature is missed because each city has its own distinctive characteristics and not all of them can be applied to each city individually. However, many scientists attempted to give relevant definition of “single-industry town”. Each definition presents a group of characteristics, for example: a single town-forming enterprise, the level of differentiation of industrial structure, a single specialization of the city, etc. There is still no a single definition since the authors use different sets of characteristics.

In this paper, it is considered that a *single-industry town* is a settlement that has legal status of a city; a town-forming enterprise is based in the town; the financial status of the town-forming enterprise determines the quality of life of the population and socio-economic development of the city. The town-forming enterprise is a company which is positioned in the city and employs a considerable part of the citizens of the city.

To clarify the definition of single-industry town the characteristics of a traditional city and single-industry town were compared (see Table 1).

Table 1. Comparison of the characteristics of city and single-industry town

	Similarities	Differences
City	• urban settlement with a population of more than 3 000 people; • historically formed within the process of territorial division of labour. • internally differentiated subsystem of the society, which provides the basic features of the reproduction of its complete structure [Osipova, 1999].	• Administrative, industrial, commercial and cultural center of the area, region, district, etc., whose inhabitants are not engaged in agriculture [Ozhegov, 1990].
Single-industry town		• Not less than 20% of population is employed by the town-forming enterprise. • Town-forming enterprise provides more than 50% of the budgetary incomes of the municipality [Resolution of the Government]. • Tough interconnection between the enterprise and socio-economic aspects of the settlement [Gundarev, 2013]. • Municipal authorities are affilliated to the time-forminfg enterprise [Luzina, 2009]. • A city with a high level of economic specialisation [Maslova, 2011].

Source: created by the author

Based on these definitions, it is possible to conclude that the city remans being cultural center, in case where the focus "…performs mainly industrial, commercial, cultural and administrative-political functions". In this regard, single-industry town is a city "with a highly specialized economic base" where most of the working population is employed by the industrial enterprise.

The concept of a single-industry town appears because there are cities with different set of functions [The types of the cities..,accessed February 27,2017]. There are industrial centers, city-ports, administrative centers and capital cities, scientific centers, resort towns, etc. [Perederiy, 2000]. Each of the functions of the city includes two aspects: internal and external. The formel aspect focuses on the fact that the city itself should provide for its functioning and development. The external aspect means that the city, acting as, is a link in the chain of the territorial division of labour, has certain obligations to other components of the territorial socio-economic system.

Single-industry town is an industrial center responsible for external functions of a city. Therefore, it makes sense to place these cities into a separate backet because they are special group whose economy and existence depends on the demand for the products of the main enterprise [The types of Russian cities..,accessed February 27,2017].

In addition to this, each country has its own definition of such cities. A visual representation of foreign terms used in defining the concept of single-industry town illustrated in the Table 2.

Table 2. Foreign approaches to definition of concept "single-industry town"

Term	**Country**	**Definition**	**Example**
One-Industry Town/ Single-Industry Town	USA, United Kingdom	The city, where the industrial enterprises belong to the same industry	Birmingham Pittsburg
Factory Town Mill Town	USA, United Kingdom, Europe	City of an industrial enterprise	Manchester
Company Town	USA, United Kingdom, Japan, India	The city, which is entirely owned by one company (infrastructure, buildings, etc.)	Toyota-city Jamshedpur
Mining Town	USA, Australia	A town that has arisen next to a mine or mines	Tennant Creek
Railway Town	USA, Canada	The city, located close to railway junctions	Atlanta Denver
Resource Town	Canada	Settlement with the mining company	Glace Bay Eliot Lake

Source: created by the author

This table above provides a good example that there is no universal scientific approach defining of the concept "single-industry town" within the international practice. Different definitions referring to such cities can be found in the foreign literature, for example, in the US and the UK the most widespread term is «One-Industry Town». This term corresponds to the Russian term of "single-industry towns".

Modern practice involves the formation and updating the list of single-industry towns in the Russian Federation, but the classification of a city as a single-industry town should only be applied if certain criteria are met. The Government of the Russian Federation provides the criteria as follows [Resolution of the Russian Government: №709, 2014]:

1) The municipality has the status of an urban district or urban settlement. Apart from municipalities, which in accordance with the law of a constituent entity of the Russian Federation is the legislative (representative) body of a constituent entity of the Russian Federation.
2) The permanent population of the municipality is more than 3 thousand people.
3) The number of employees of the town-forming organization reached 20% of the average number of employees of all organizations operating in the territory of the municipality during the period of five years preceding the date of approval of the list of single-industry towns.
4) The implementation of one of these organizations (one of the branches of legal persons in the municipality or several organizations) activities mining (except oil and gas), and/or production, and/or the processing of industrial products.

However, it is believed that these criteria are not enough to objectively evaluate the settlement as a single-industry [Manaeva, Rastvortseva, 2015]. There is an expansion of the criteria for a single-industry town to priority, additional and secondary (see figure 1).

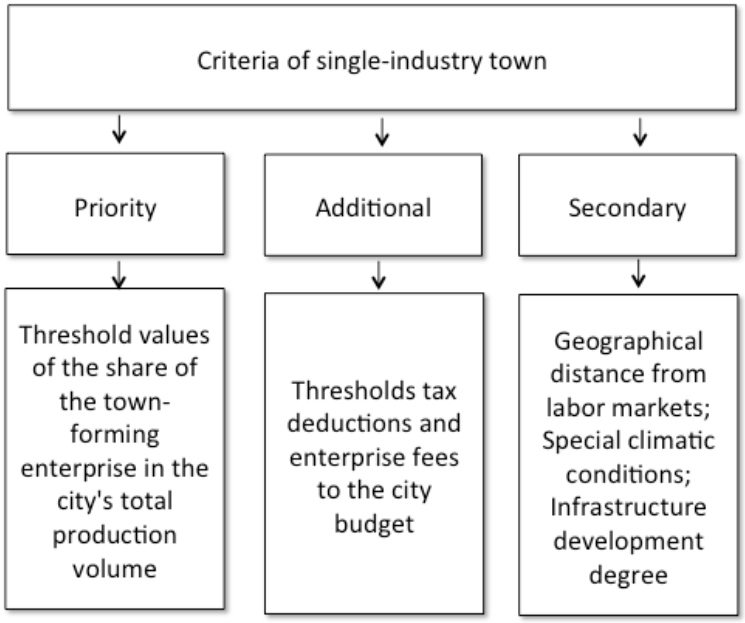

Figure 1. Criteria of single-industry town
Source: [Manaeva, Rastvortseva, 2015]

It should be emphasised that secondary criteria on a stand-alone basis (without priority and additional ones) cannot be used to characterize a settlement as a single-industry town.

Based on all the collected data it can be argued that a single-industry town is a specific city that depends on the town-forming enterprise. The single-industry town may be both the city and the township, if the population is more than 3,000 people. Unlike in a traditional city, only one sector of the economy is very well developed, in a single-industry town - the industrial sector. That is why such cities are very specific and cannot be developed as standard cities.

1.1.2. Emergence of single-industry towns in Russia

Single-industry town is a natural phenomenon in Russia due to its economic and geographical characteristics, primarily a large array of undeveloped areas. Space exploration and construction of complete cities in new industrial areas (e.g., fields development) led to the formation of a wide network of single-industry towns. To eradicate the phenomenon of single-industry towns in Russia is impossible – one needs to work with it, taking it as a given. Per official data, today in Russia there are 313 single-industry towns.

The formation of single-industry towns began many years ago during the era of Peter the Great [Titov, Yashina, 2011]. The process of formation of single-industry towns is presented in Figure 2. Originally Russian cities were created as high-performance industrial centers [Titov, Yashina, 2011]. Several cities appeared in the 18-19th century simultaneously with the development of the country's industry, as well as the active population of the Urals, Siberia and the Far East. Cities, or rather small settlements, are usually located near the newly discovered

mineral deposits. One of the famous examples is – Karabash (Chelyabinsk region) next to which in the 19th century copper ore deposits have been found and the first factory was built.

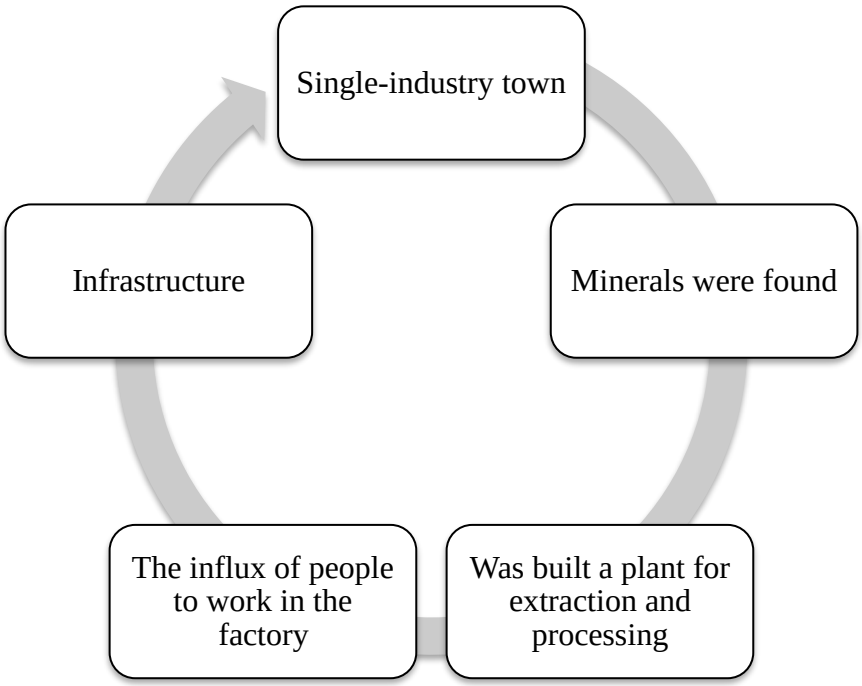

Figure 2. The formation of single-industry town

Source: [Titov, Yashina, 2011]

However, some researchers attribute the emergence of such settlements to an even earlier historical period. Professor of Moscow state University Natalia Zubarevich notes that the single-industry towns as a phenomenon are typical for industrial stage of development in many countries, especially in their early stages [Zubarevich, 2009]. It is worth noting that in Russia the process of their formation was particularly large because of the planned economy. Table 3 presents the stages of the emergence of single-industry towns in Russia since Peter the great [Vereshagina, Trushina, 2015] .

Table 3. The stages of the emergence of single-industry towns in Russia

The time of occurrence	Socio-economic process contributing to the formation of single-industry towns	The types of single-industry towns	Districts	Examples
The beginning of the XVIII — late XIX century	Industrial conversion of Peter the Great	Factory towns of heavy industry	Ural economic region	Asha, Karabash
The end of the XIX century — 20th years of XX century	"Calico capitalism," the development of light industry	Company towns based on consolidation of village crafts	Central economic region	Krasnovishersk
1930 year	Industrial conversion	Company towns as part of clusters	Ural and East Siberian economic regions	Magnitogorsk, Novokuznetsk, Vorkuta, Norilsk
1935-1945	The second world war	Monopoly based on the evacuated enterprises	The Volga region	Bezymyanka
After the 1950-ies	The dispersal of production from large cities, specialization of the individual mono-settlements'	Cities of Power Engineering	Northern economic region	Kirovsk
		The centers of production of oil and gas	The Ural and West Siberian economic regions	Neftekamsk
		Narrowly specialized centers of the initial stage of production	Central black earth economic region	Sudga, Zolotuha
		Closed administrative territorial units	Ural economic region	Snezhinsk, Ozersk, Zheleznogorsk, Serov
1990s	The redistribution of property	State-owned enterprises	Ural economic region	Novotroizk Kamensk-Uralsk
2000s	Stabilization	Single-industry towns	Everywhere	Belbey Chernogorsk

According to: [Ilyena, 2013]

The last two stages are considered further in more details because they had the biggest influence on the formation of current single-industry towns.

1) The redistribution of property in 1990s

The reasons of privatization in Russia: 1) to eliminate the actual monopoly of state ownership; 2) to transfer the private property of unprofitable industries which are a heavy burden on the budgets of all levels (in cases where such transfer is economically and socially justified); 3) to create the economic foundation changed the country's political regime [Shik, Labudin, 2015].

This stage had a very strong impact on the single-industry towns with the number of them decreasing several times. These changes are presented in the figure 3: the percentages of single-industry towns and their population before and after the privatization, increasing population's poverty and low wages lead to a reduction of workers in the service sector. The demographic situation has noticeably changed - there was an outflow of the most capable part of the population. Because of these negative processes, deteriorating social conditions and psychological climate, adults lost a sustainable perspective and young people lost an opportunity of employment, and children lost an opportunity to complete education.

Also, it is very important to note that in such communities there was a significant aggravation of employment problems. In the previous period (after the 1950-ies) single-industry towns were distinguished by a narrow sphere of labour application when in the crisis, the absolute loss of the prevailing part of jobs at major employers and in other sectors of the economy of the city occurred.

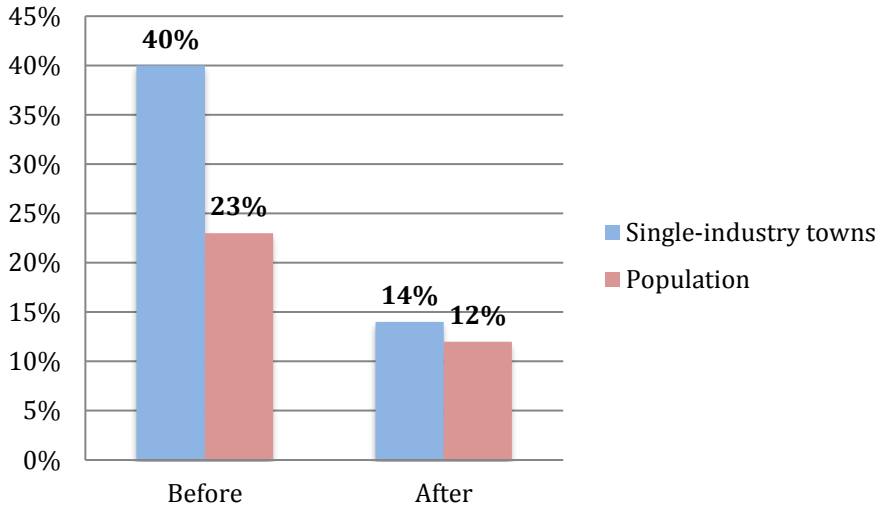

Figure 3. The percentage of single-industry towns before and after privatization

Source: [Shik & Labudin, 2015]

2) Stabilization (2000s)

By 2001 most town-forming enterprises belonged to large private companies and businesses (85% of the total number of cities), and another 15% belonged to natural monopolies and large companies, which are state-controlled (for example, the "Gazprom" company and JSC "ALROSA") [Ilyina, 2013].

These changes have their pros and cons. Some argue that they have more disadvantages [Makieva, Krivogov, 2011]. The following problems faced by single-industry towns are identified:

- The lack of stable demand for manufactured products produced by the main enterprise, as well as the dependence of the price of products from the world conjuncture.
- Low level of productivity due to obsolete technologies, the gap of technological production chains.
- Additional burden on companies about the need to maintain social facilities.
- The accumulated socio-economic problems in businesses and cities.
- Lack of alternative employment opportunities, low activity of the population to participate in the small and medium business.
- Excessive ecological load on the territory with the town-forming enterprises.

Other problems will be presented and discussed in the next part of the master thesis.

At the beginning of 1990 the structure of single-industry towns in Russia was a complex system of cities of different size, with production complexity and skills of the inhabitants. The main enterprise in many cases did not serve the typical social functions.

The narrow specialization of most cities, in some cases, was the direct result of their youth: the cities had no opportunity to develop other functions since the collapse of the Soviet Union and the subsequent economic crisis.

Therefore, the structure of single-industry towns in Russia became a rather complicated conglomerate of cities of different sizes (from cities like Krasnoyarsk, Kostomuksha to the local cities and settlements of city type), and complexity of production and skills of their residents - (from the Troitsk and Obninsk up to the Hype and Islands) [Makieva, Krivogov, 2011].

Overall, some authors [Anas, Xiong, 2015] believe that the formation of single-industry towns is a necessity and go much further than just the formation of industrial towns. They consider all the causes of the formation of the city and believe that the most important aspect of the economics of cities is the dynamic with which new cities are formed out of existing ones along the growth path of a system of cities.

Based on the following data it can be concluded that single-industry towns existed in Russia for a long time. Each city appeared for different reasons and for a long time the government was not interested in developing these cities. Nowadays this phenomenon is carefully examined, as the government realized that the level and stability of economic growth in the country is largely determined by the state and the potential of economic development of individual regions and settlements, forming the basis of the country's industry.

1.2. Contemporary issues of single-industry towns development in Russia

1.2.1. Classifications of single-industry towns

Single-industry towns are being systematically at risk because of their one sided development, as they have low sustainability and frequently backward economic background. Finding solutions to improve the situation, improving level of adaption of single industry towns to a transformation of the external environment, determination of an effective strategy of development-all these methods lead to a criteria determination for becoming a single-industry town, determination of macro and micro valuations. Clear outline of social and economical problems, weaknesses and strengths of a development strategy is very important for the regional economy. When classifying single-industry towns it's very important to define factors that influence internal and external environment, and define resource base of the enterprise.

At present there are more than ten classifications of single-industry towns. In this paper, only two main ones will be considered:

- *The Russian government's classification (2014 year)*;
- *"Basic element" classification (2013 year)*;

1) The Russian government's classification

In the official sources, criteria of single-industry towns are closely related to with their classification. The official document from 1 January 2014 says that nowadays there are 313 single-industry towns, which is home to one-tenth of the country's population [Resolution of the Russian Government: №1398-r, 2014]. They are divided into three categories [Resolution of the Russian Government: №709, 2014].

1. **With a complex and critical environment (75 municipality).**

The city needs to meet at least 2 of the following criteria:

a) Closing of the town-forming enterprise.

b) There is information about the planned release of the workers forming organizations in excess of 10 percent of the average number of employees of such organization.

c) Market conditions and (or) the development of the industry in which operates the town-forming organization assessed as adverse.

d) The level of registered unemployment in the municipality in 2 and more times higher than average unemployment in Russian Federation.

f) The socio-economic situation in the municipality is estimated population as disadvantaged (by results of sociological surveys conducted by the Federal security service of the Russian Federation).

2. **With a risk of deterioration of the social-economic situation (149 municipality).**

The city needs to meet at least 1 of the following criteria:

a) There is information about the planned dismissal of town-forming organizations of workers where it is more than 3 per cent of the average number of employees of the organization.

b) Unemployment rate in the municipality is greater than the average unemployment rate in the Russian Federation.

3. **With a relatively stable situation (89 municipality).**

The city needs to meet the following criteria:

a) Town-forming organization carries out production activities on the territory of the municipality.

b) There is no information on the planned dismissal of worker's town-forming organization more than 3 per cent of the average number of employees of the organization.

c) Unemployment rate in the municipality does not exceed the average level of unemployment in the Russian Federation.

d) The socio-economic situation in the municipality assessed by the population as good (by the results of sociological surveys conducted by the Federal security service of the Russian Federation).

Per the criteria this classification is based on the analysis of the socio-economic situation of each city and on indicators that relate to the current financial situation of the town-forming enterprise. Of course, this classification is official and based on it all 313 single-industry towns are divided.

2) "Basic element" classification

In 2013 "Basic element" published a report "Single-industry Towns. Reboot" [Basic element, 2015]. It conducted an unprecedented study of 18 single-industry towns and small cities of Russia, becaming the first systematic study of the problem of single-industry towns.

The objective of the study was to form a new model of single-industry town's finctions in Russia in the changed economic conditions, and to define a set of activities (what to do) and mechanisms for their implementation (how to do).

The study was conducted over 300 in-depth interviews with managers of management

companies, heads of core enterprises city employees and regional administrations and authorities of subjects of the Russian Federation, local entrepreneurs, deputies and representatives of trade unions, various NGOs, urban activists.

This research is very important for this paper because of the conclusions it reached. The study showed that single-industry towns of Russia are not homogeneous, but instead are divided into several types depending on the main enterprise prospects and urban economy potential. Therefore, based on the state policy, single-industry towns must have a differentiated approach to settlements of various types. Differentiated policy allows to effectively use public funds to solve the problems of most Russian single-industry settlements in 4-5 years.

«Basic element» based on the analysis of the cities had formulated three standard models of development of Russian single-industry towns, "Controlled compression", "Stable single-industry town " and "Industrial diversification" (see Table 4.). The study showed that single-industry towns of Russia have remarkably similar problems, making it possible to classify them into several types.

The study reviewed the following two indicators: the development potential of the town-forming enterprise and an alternative development of urban economic, which allows presenting the final typology:

1. Dynamic city – Dynamic town-forming enterprise
2. Dynamic city – Degraded town-forming enterprise
3. Degraded city - Dynamic town-forming enterprise
4. Degraded city - Degraded town-forming enterprise

Table 4. Models of single-industry town's development

Models	**Actions**	**Responsible parties**
«Controlled compression»	- A set of measures to ensure employment - Ensuring social guarantees - Urban Development Policy - Measures to stimulate small and medium-sized businesses as an anti-crisis sphere of employment	Interagency cooperation, as well as active involvement of local and regional authorities. In addition, it is necessary to coordinate the actions of the authorities and owners of the town-forming enterprise.
«Stable single-industry town»	- Provide high standards of social services - Maintenance and development of social programs - Development of the	Municipal authority, administration.

Models	Actions	Responsible parties
	town-forming enterprise	
«Industrial diversification»		
Industrial diversification of single-industry town	- Diversification of the economy through the creation of new enterprises - Development of the social sphere - Urban environment improvement	Local authorities
Sustainable development of a diversified city with a closing "town-forming" enterprise	- Liquidation of enterprises - Labour market development - Urban environment improvement	Local authorities
Sustainable development of a diversified city with a working "town-forming" enterprise	- Increase of investment attractiveness - Urban environment improvement - Social standards improvment	Local authorities

According to: [Basic Element, 2015]

None of these classifications considers a single-industry town from the point of view of the town-forming enterprise. In general, the emphasis is placed on the socio-economic development of the single-industry town as a whole. Nevertheless, these classifications show that there are three basic conditions of single-industry towns: stable, with a deteriorating risk and a city with a serious problem.

1.2.2. Main problems of single-industry towns and their causes

Socio-economic environment of single-industry towns is formed directly from town-forming enterprises. The level of development and its quality characteristics have a significant impact on the living standards of its population. At the same time, the development of engineering, economic and social infrastructure, the policy of the municipality and the regional authorities, the investment attractiveness of the territory and other factors shape the environment of the main enterprise functions. Thus, it can be argued that the external conditions have a significant impact on the business. Therefore, the strategy of development of single-industry towns and the region mainly depends on the activity of the core enterprises.

Some scientists believe that the problem of single-industry towns is not only in the high level of unemployment [Gundarev, 2013] but it could also be related to social-economic

problems, raw materials problems, ecological problems and the problems related to lack of another sources. All these problems are directly linked to the town-forming enterprise.

Socio-economic problems

1) Closure of the town-forming enterprise

In the case of closure of the town-forming enterprise, the city is faced with serious socio-economic problems. Firstly, the unemployment rate in a city will increase. Secondly,the employees of any enterprise specialty skilled workers, making it harder for them to find any other job in the city. This means that they must move to another town where their skills will be in demand. As a result, not only does the unemployment rate go up but so does the migration rate. This means that the main function of the city is not working, and the government needs to make a decision whether to liquidate the city or compress it. The elimination of the city is a difficult process both socially and economically. Therefore, the best course of action is to compress the city. Controlled compression is a process where, due to the migration, which reduces city's population, the idea is to get optimal size in the state view of the urban economy while ensuring social guarantees for the residents who remain in the city [Basic element, 2015].

2) Unemployment

The main problem of single-industry towns is high level of unemployment, which in turn leads to another problem - the outfall of the population. As a result, there becomes no need to develop the infrastructure further. Thus, it can be argued that unemployment is the main driver behind other problems in single-industry towns [Vyalshina, 2012]. The causes of the problems in the field of unemployment are presented in the Table 5.

The unemployment rate in all territories went up by 10% in 2016, while in single-industry towns it doubled up to 20%.

In 2016 in all localities the unemployment rate increased by 10%, in single-industry towns the increase was 20%. The unemployment rate above the national average was recorded in 206 single-industry towns (overall there are 313 single-industry towns in Russia). It is worth mentioning that in 84 single-industry towns this rate was twice as high as the national average [In Russia the unemployment... accessed February 27, 2017].

Table 5. The cause of the problems in the field of unemployment

Type of single-industry town	**The cause of the problem in the field of employment**
Settlement associated with natural resource potential of the country	- The exhaustion of stocks of harvested resource unprofitable for further exploitation; - The lack of competitiveness or lack of demand for products in the domestic and foreign markets.
The settlements with highly specialized processing enterprises	- Imperfect the state tax system - The gap previously existing economic relations backwardness of the technologies used - Depreciation of fixed no competitiveness funds or lack of demand for products - The lack of qualified management
The settlements with the objects of the military-industrial complex	- Reduction of state orders for defense products - The uncertainty of the prospects of development of the main production - The limited freedom of action of the leaders of the defense industry enterprises
The settlements on the basis of high-tech enterprises and organizations	- The reduction of state orders and volume of financing of scientific activities

Source: [Garifullina, 2014]

3) Migration

The close down of an enterprise is just one of the reasons for migration. Other causes are related to poor infrastructure, lack of education institutions and high level of unemployment. For example, in Sayanogorsk the highest percentage of migrants is among young people from 30 to 40 (working-age population). And another group is people at the age of 50-64 (retirement age) (see figure 4).

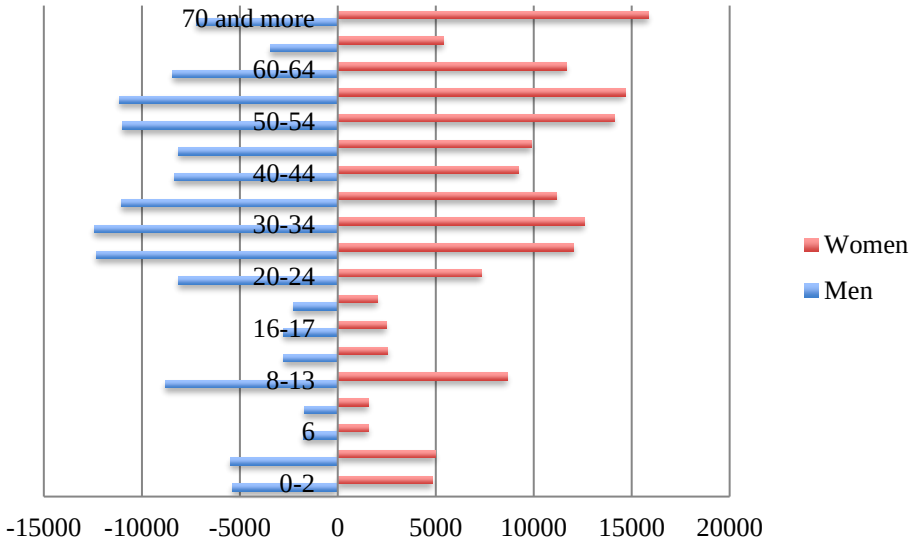

Figure 4. Migration over 5 years (2010-2015) in Sayanogorsk city
According to: [ROSSTAT]

Raw materials problems

1) Resource depletion

Enterprises in single-industry towns are divided into mining and processing which means that sometimes the life cycle of a city depends on its resources. If the resources are depleted, then the town-forming enterprise and the government should decide whether to liquidate the city or to compress it. For example, oil reserves were discovered in the 1960s in the North of Sakhalin. The government ordered this field to be used for industrial development. At the same time the construction of the city Kolendo has begun, which was subsequently inhabited by oil field workers and their families. The maximum number of residents in Kolendo was recorded in 1979 and it was 2,022 people.

In the early 1990s oil reserves in Kolodynska field began to decrease. In 1996 the government decided to close the field and relocate its inhabitants. The last inhabitants were removed from Kolendo in 2002 [History of Kolendo…accessed February 27,2017].

Ecological problems

1) Environmental pollution

Industrial waste is one of the causes of environmental pollution. For example, in the city Norilsk there is the major plant "Norilsk Nickel", which emits 2 million tons of pollution into the city per year, accounting for almost 100% of all emissions in the city. Another example is the city of Lipetsk, in which more than 90% of 322 thousand tones are because of emissions at Novolipetsk steel [Ecological problems in Russia… accessed February 27,2017].

2) Air pollution

Air pollution in the industrial cities is also a significant problem. This problem is the cause of the population' health problems. In areas where there is heaving air pollution from industrial enterprises people are suffering 1,5-3 times more than from respiratory diseases and various allergic reactions. There is increased frequency of birth defects; such as congential malformations, on industrial territories (Sterlitamak, Bashkortostan, Kemerovo, Novokuznetsk). In addition to this, in Russian cities with aluminum smelters and large enterprises of ferrous metallurgy the population often suffers from cancer, in particular lung cancer [Industrial air pollution..,accessed February 27,2017].

Poor infrastructure

In single-industry towns there are very strong engineering and energy infrastructure, which fit the needs of the town-forming enterprise. The infrastructure is adapted mainly for the purposes of the main enterprise and it is not intended to serve diversified economy [Find single-industry towns development…accessed February 27,2017].

In addition to this, it is well-known that other important factor of development of single-industry towns are: 1) very slow formation of economic and institutional environment for innovative development; 2) low entrepreneurial activity of the local population; 3) ineffectiveness of municipal management as a function of the Mayor of the town-forming enterprise; 4) unwillingness of the bulk of the local population to make a choice in favor of relocation, retraining or changing profession.

It is clear that the problem of single-industry towns in Russia is not solved right now. The total number of such cities is more than 300 cities and the population living in them amounts to 13.5 million people or nearly 10% of the population of Russia. For one third of single-industry towns the economic situation is already critical. Town-forming enterprise closure makes the unemployed the main problem in such cities, leading to increased social tensions in many of them.

1.2.3. International experience of single-industry towns development

However, as it was already stated these towns are not a purely Russian phenomenon. During the industrialization stages in developed economics (the US, the UK, Germany) such cities were also formed around one or multiple industry-focused productions. This process, however, in Russia became very extensive compared to other countries.

For example, a while back in the United States the term "city-factory"emerged and the government tried to understand how these cities emerged. This term appeared in the US because they began to shape the city around the plant, and that led to the emergence of cities with very narrow specialization.

City-factory is a very common occurrence in the planned economy but they also existed all the time in other economic systems. City-factory appeared in the US at the end of the 19th century specifically in the industrial regions of the Middle West. At the peak of their development the number of city-factory towns in the US reached 2500, which accounted for 3% of the US population [Krykova, Rafilova, 2003]. Now such cities are related to the concept of "Rust Belt". The Rust Belt is a region in the US where economic decline, population loss, and urban decay have left the once booming area desolate of industry.

Before its decline in the 20th Century, it was the focus of the American industrial development, and was called the Manufacturing Belt or Factory Belt. The term "Rust Belt" is meant to refer to the now abandoned factories in the area [Pickard, 2016].

The Rust belt covers a section of the northeast of the US, running from the East of the state of New York, through Pennsylvania, Ohio and Michigan, all the way to the North Indiana and East Illinois and Wisconsin (see figure 5).

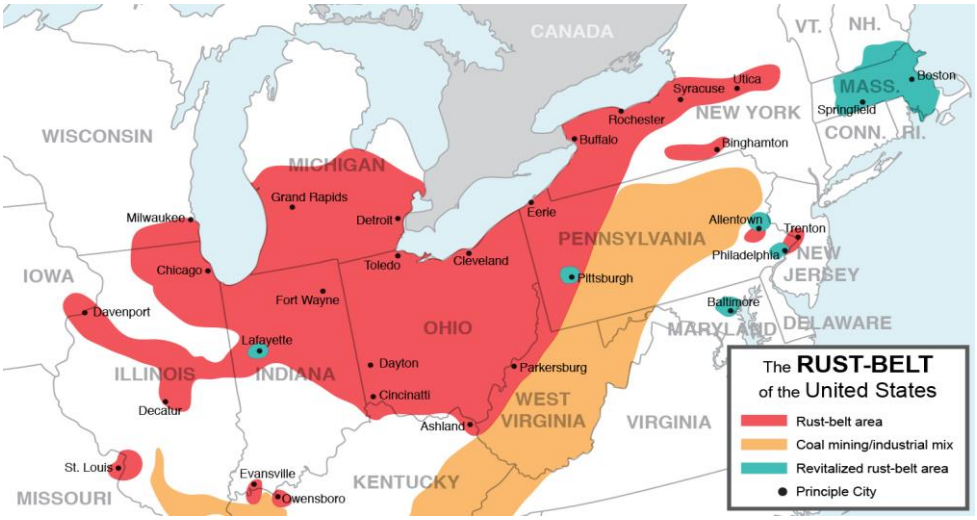

Figure 5. The Rust-Belt of the United States
Source: [Phiou]

Table 6. The history of the development of the «Rust Belt»

Date	Events	States (cities)
Industrial Revolution	The industry began to emerge in the states, in which there were resources and accessibility of water transport.	The enterprise was established in: West Virginia, Tennessee, Kentucky, The Western part of Pennsylvania
The end of the XIX century	Rapid population growth due to mass migration from Europe provided the Industrialists with sufficient labor resources. Goods can be transported through the channels on the U.S. East coast and in the Great lakes basin. Later, the transportation of goods was accelerated by railway transport. Coal, iron ore and other raw materials were transported to major cities: Pittsburgh, Gary, Buffalo, Cleveland, Youngstown, in which there was a rapid development of steel industry [Schondelmeyer, 2003].	Duluth, Chicago, Cleveland, Buffalo, Detroit, Milwaukee, Toledo arose as transport hubs.
The middle of the XX century	The steel industry in the United States met with the competition of developing countries. Where possible, States have coped with its competitors in the best traditions of the colonists, absorbing their enterprise capacity of TNCs and their debt on selected loans.	

According to: [Piiparinen, Russell & Post, 2015]

Since the 1970s the region begins its decline provoked by mass unemployment, closing down of factories, enterprises and the growing rate of crime. It was then when the term of Rust Belt first appeared, representing the once blooming state of manufacturing and industry.

The trend of the decline of the steel industry in the region continues to persist, while prosperous South creates new businesses and jobs. For example, while Ohio is losing 10 thousand jobs, Texas creates 1.6 million of them. While the auto industry in Michigan went down by more than 83 thousand workers in Alabama, Tennessee, Kentucky, Georgia, North Carolina, South Carolina, Virginia and Texas, the automobile industry has created more than 90 thousand jobs [Rust Belt of the US…accessed February 27,2017].

The Rust Belt zone includes many cities in the United States, while the most endangered are: Detroit, Flint, Cleveland, Pittsburgh, Erie, Duluth, Buffalo, Binghamton, Rochester, Akron, Toledo, Syracuse. Now, many cities belonging to the Rust Belt have no functioning enterprises. Part of the population left these regions in search of new work while the other part still lives there and preferred not to leave their homes. The only way for further development of these regions is the resumption of the work of industrial enterprises or build new ones from scratch.

Due to open gas deposits in 2012 the project have been reviewedaimed at the revival of Rust Belt in the US. For example, Royal Dutch Shell invested in the construction of a chemical factory in beaver County (Pennsylvania) [Gold, Kasselman, 2012]. The opening is planned for 2019 [Volkova, 2015].

The example of Rust Belt cities showcases the fact that governments are doing nothing with single-industry towns that have no plants anymore. These cities exist by themselves, and the only way to revive Rust Belt is by investing into the construction of new industrial facilities.

Russian single-industry towns and US cities related to “Rust Belt” have similar problems as they are both directly dependent on the town-forming enterprise. When the town-forming entreprise works well, it gives people working placements and the city starts to develop dynamically. If the town forming enterprise starts to let go of people or even worse closes completely, the city starts degrading.

As it was stated earlier, the US government does not try to develop single-industry towns and they become ghost towns. However the situation is slightly different in Russia. There are many single-industry towns where the town-forming enterprise functions, but the socio-economic indicators of the city are still very low.

Due to the large number of single-industry towns and the fact that most of them are in a critical situation, the Government of the Russian Federation created a "Fund of development of single-industry towns" in 2014. This organization was created based on one sole shareholder – “Vnesheconombank”, the contribution of which amounted to only 16.4 million Rubles

[Koroleva, 2017]. Currently funding for the Fund is coming from the Federal budget based on “Rules of granting from the Federal budget in 2014-2017 a subsidy of Fund of development of single-industry towns”. The government resolution approved the opportunity of spending these funds not only for construction but also for reconstruction of the infrastructure in the towns. According to the data, in the period of 2014-2015 the Fund got 7.5 billion rubles from the Federal budget. "Priority programs: "the Integrated development of towns" received the budget allocation for the subsidy Fund in 2017 and the for the planned period 2018-2019, talling to the amount of 15.9 billion Rubles [Makieva, 2017].

With this fund’help a program "Integrated Development of Single-industry towns" was created [In Russian single-industry towns.., accessed February 27,2017]. This program intends to reduce the number of single-industry towns by creating new jobs not related to the town-forming enterprise.

Based on the outline of this program, the following activities are planned [Passport of priority programs...,2016]:

1. Create new opportunities for small business developments in single-industry towns in 2018:
    a) To create areas of advanced socio-economic development in 100 single-industry towns.
    b) To construct new infrastructure facilities in 15 single-industry towns.
    c) Development and implementation of municipal support programs for SMEs in 200 single-industry towns.

However, the Accounting Chamber of the Russian Federation considered the results of testing of the effectiveness of the use of federal budget funds allocated to the non-profit organization "Fund of development of single-industry towns". The result was that socio-economic situation in most towns, despite the measures taken by the state, is deteriorating, while the budget expenditures increased. Overall, the existing system of the state support of single-industry towns characterized by formalism and lack of Executive discipline and lack of responsibility for decisions and their consequences.

Nowadays the main problem of all single-industry towns is that the state’s aid is not enough for the dynamic development of such cities. That is why it makes sense to consider the role of the town-forming enterprise, not only from the point of single-industry town formation, but also as the main side invested in the city’s further development.

CHAPTER 2. CORPORATE SOCIAL RESPONSIBILITY

2.1. Corporate social responsibility

While governments and the public may be considered as the key players in the single-industry towns' development, enterprises are equally as important. The enterprises are a more active part of this system than the public is as in some cases they form or affect the public opinion. The relationship between governments and enterprises as well as consumers and enterprises is interactive. Either enterprise would demand a clean environment to operate in or the local authorities would expect from enterprises not to pollute, but to operate in an ethical manner.

Definition of corporate social responsibility

When it comes to the responsibilities of the town-forming enterprise, they are divided into two groups: 1) activities directly associated with the enterprise (economical, ecological); 2) not directly related to the enterprise (ethical, philanthropical).

The first definition of corporate social responsibility (CSR) was first presented in 1953 in the work of G. Bowen's. According to the author, the social responsibility of business is to "implement the policy, such decisions or follow such a line of conduct which would be desirable from the position of the goals and values of society" [Bowen, 1953]. K. Davis, in his work emphasized that this responsibility is related to the "decisions and actions of businessmen who are, for reasons at least partially beyond direct economic or technical interest of the company" [Davis, 1960].

In 1975, K. Davis and R. Blomstrom published a paper in which they determined the orientation of CSR as "the obligation of decision-makers, to take such action, which will focus not only on the satisfaction of their own interests, but also to protection and enhancement of public wealth" [Davis, Blomstrom. 1975].

Over the course of the years there were many definitions of corporate social responsibility, but after the release of the international standard ISO 26000 in 2010: "Guidance on social responsibility" most experts agreed that the definition is currently the most accurate and complete [ISO 26000-Social Responsibility…accessed February 27,2017]:

«Social responsibility – responsibility of an organization for the impacts of its decisions and activities on society and the environment through transparent and ethical behavior that:

– Contributes to a sustainable development including the development of health and the welfare of society.

– Consider the expectations of stakeholders.

– Comply with the applicable legislation and consistent with international norms of behavior.

– Introduce throughout the organization».

Corporative social responsibility of the enterprise

There are two views on CSR of the enterprise. In the first case is is "the social responsibility of business is to increase its profits" [Friedman, 1970]. Other authors believe that the business carries numerous social, civic, and moral obligations. The subsequent study of CSR presented in the works of MacGuire (1963) and S. Network (1975), in which they detailed out the concept and content of corporate social responsibility, belonging to the latter opinion.

There are also two theories: legitimacy and stakeholder theory. Legitimacy theory is grounded in the idea that a “social contract” exists between business and society. Society allows firms to exist, and in return expects them to fulfill their obligations and expectations [Branco, Rodrigues, 2006]. Thus, to survive, a firm must ensure that its activities are in accord with the expectations, values, and norms of the society. In other words, legitimacy theory suggests that organizations must legitimize their activities by engaging in CSR to gain the acceptance and support of stakeholder groups. Stakeholder theory, on the other hand, is based on the notion that companies have several stakeholders’ groups [Donaldson, Preston, 1995] with varying needs and expectations. The instrumental facet of stakeholder theory argues that CSR activities have implications for firms’ outcomes [Donaldson, Preston, 1995]; so, a firm that engages in CSR activities may improve its bottom line. Van der Laan et al. (2008) support the view that the success of a business is dependent on the extent to which the firm manages to deal with the different needs of stakeholders. The nature of the relationship between CSR and firms’ financial performance is not clear – at least not a priori clear [Margolis, Walsh, 2003].

Based on this works A. Carroll suggested interpretation of the CSR meaning "to meet the economic, legal, ethical and discretionary expectations placed on organizations by society at a given period" [Caroll, 1979] (see figure 6).

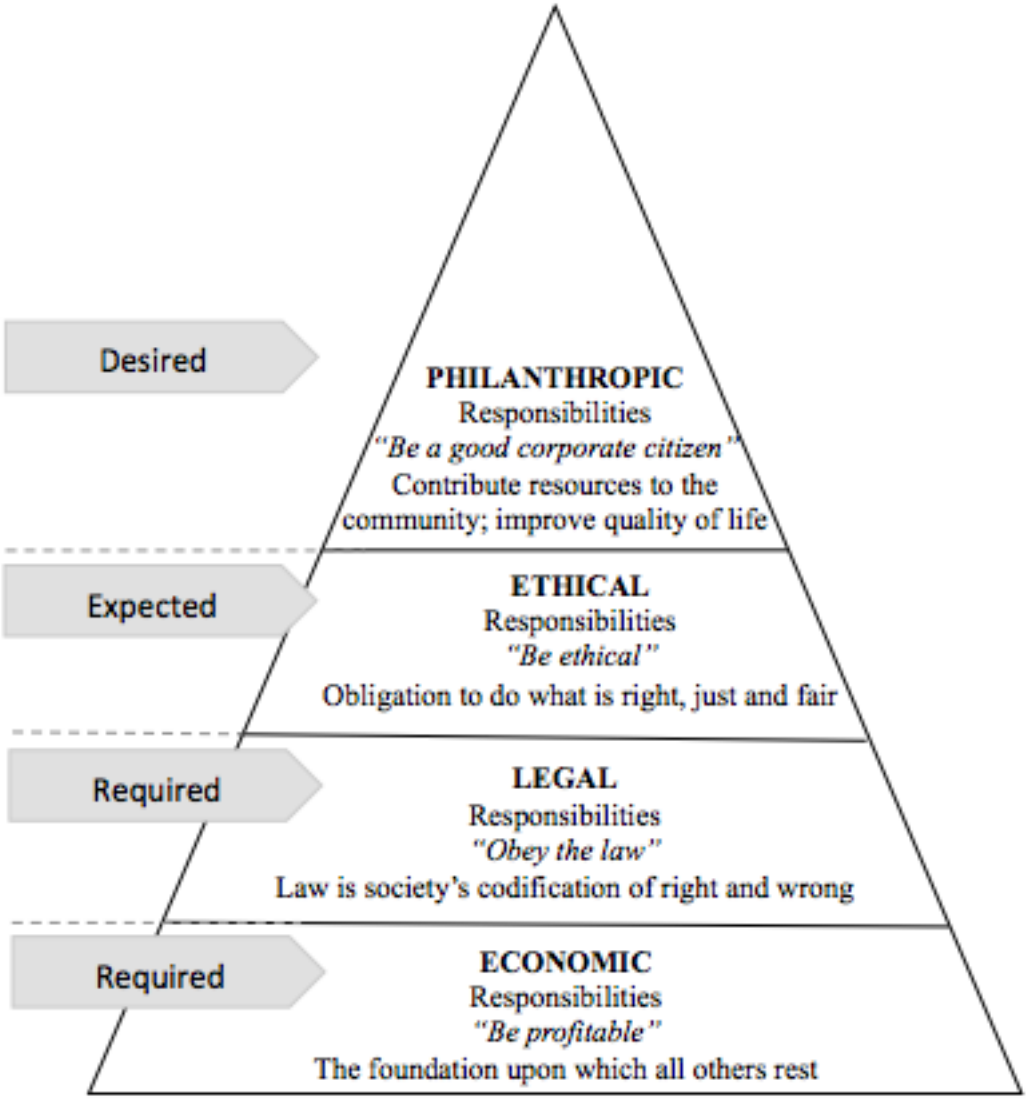

Figure 6. Caroll's pyramid of Corporate Social Responsibility
Source: [Caroll, 1979]

According to this model, CSR is a multi-level responsibility, which can be represented in the form of a pyramid. Lying at the bottom of the pyramid is the "economic responsibility" which directly determines the basic function of a company in the market as producer of goods and services to meet the needs of consumers. In other words, any company that implements its economic responsibility to society is already socially responsible.

Economic responsibilities

The responsibilities are to provide investors with adequate and attractive returns on their investment. To be profitable means maximize sales, minimize costs, make sound strategic decisions and be attentive to dividend policy.

Legal responsibilities

The responsibilities are to obey all the laws and adhere to all regulations. This includes environmental and consumer laws, laws protecting employees, fulfilling all contractual obligations honoring warranties and guarantees.

Ethical responsibilities

The obligation is to do what is right, just, and fair and to avoid or minimize harm to stakeholders (employees, consumers, the environment, and others). It is essential to avoid questionable practices and respond to the spirit as well as letter of law, assume that law is a basis for behavior, thus it is required yo operate above its minimum.

Philanthropic responsibilities

The business is expected to be a good corporate citizen and to fulfill its philanthropic responsibilities, to contribute financial and human resources to the community and to improve the quality of life. It is also responsible for providing programs supporting the community such as education, health/human services, culture and arts, civic and promote and engages in volunteerism.

This thesis considers primarily the philanthropic responsibility of the main enterprise to the citizens of single-industry towns. Therefore, the last element will be discussed in more detail. The "Philanthropic responsibilities" are not disclosed fully because the definition of voluntary office claims the term "responsibility" is "inaccurate". Philanthropy is not an obligation of the business, but is something "desired" beyond "required". The author of the pyramid offers a solution to the current misunderstanding of the term by comparing the philanthropic responsibility to the categories of the ethical and (or) economic responsibility.

- Can be attributed to ethical responsibility, as the differences between "philanthropic" and "ethical" activities sometimes difficult to draw in theory and in practice.
- Can be attributed to economic responsibility as philanthropy is often based on economic interest. Engaging in "strategic philanthropy", companies are often driven by economic motives, based on their economic responsibility.

In addition to this, A. Carroll noted that CSR couldn’t be considered in relation to the society. For each organization leading the business, society is a system of interested parties, including individuals, groups, and organizations that influence accepted decisions and (or) appear under the influence of these solutions.

Based on this A. Carroll proposed to analyse CSR using the matrix displaying the responsibility system of enterprise to live up to the expectations of every interested party (see table 8) [Caroll, 1991].

Based on the above material it can be concluded that CSR can be defined as the rational response of companies to a system of conflicting expectations of stakeholders aimed at sustainable development of the company. Thus, to sustainably develop the company is obliged to meet all interested parties in accordance with levels of CSR.

This specificity corresponds to the relationship between the single-industry towns and town-forming enterprises. In order to be successful, town-forming enterprises build a clear policy of social responsibility towards the interested parties. Table 7 shows the information about stakeholders and in which CSR level they are interested. Table 8 provides the same information, but in a schematic form. First of all, stakeholders expect that town-forming enterprise will fulfill economic and legal obligations. Single-industry towns depend on town-forming enterprise, therefore, the city expects that the enterprise will also implement ethical and philanthropic obligations.

Table 7. Matrix of interested parties and levels of CSR in single-industry towns

Stakeholders	**Level of CSR**			
	Economic	**Legal***	**Ethical**	**Philathropic**
The owners	Increase profits (receiving dividends, increasing resources)		Do not deceive the owners and provide timely reporting	
Consumers		• The products comply with international quality standards • There are all necessary certificates	• Provide quality products • Do not infringe the rights of consumers	
Employees	Increase profits (additional opportunities for financial incentives)	• Official employment • Paid holiday • Provision of voluntary medical insurance • Compliance with the employment contract	• To develop staff • No discrimination by gender/social and other characteristics • Ensuring equal rights to all employees • Freedom of speech	• Organization of events for employees and their children • Active staff support (tangible/intangible) • Provision of free health-improving trips
Competitors			• Do not deceive competitors • Do not dump prices • Respectfully communicate with competitors	
Suppliers		• Compliance with the signed contract	• Do not deceive suppliers	

		• Ensuring Timely Payment for Providing Services	• Report about any problems in time • Timely renew contract	
Municipal authorities	Increase profits (profit tax)	• Act in accordance with the legislation of the Russian Federation	• Pay taxes • Do not forge documents • To have a polite negotiations with the authorities	• Assist in the improvement of the city • To take part of the expenses for water and electricity • Actively invest in environmental protection and ecology
Society as a whole	Increase profits (more profit company makes bigger the taxes amounts are, which increase opportunity of investing more money in the city development and improvement of public services)		• Protect the environment • Ability to take responsibility for bad deeds	• To help socially unprotected layers of the population (children, disabled people, large families, orphans) • Organize different concerts • Organize competitions, fairs • To restore the historically significant building • To provide financial support to different non-governmental organizations

Source: created by the author

* Legal activity is hard to measure, so in this case it is assumed that the enterprise operates in accordance with the legislation of the Russian Federation.

Table 8. Matrix of interested parties and levels of CSR in single-industry towns

Stakeholders	**Level of CSR**			
	Economic	**Legal**	**Ethical**	**Philanthropic**
The owners	X	X	X	
Consumers		X	X	
Employees	X	X	X	X
Competitors			X	
Suppliers		X	X	
Municipal authorities	X	X	X	X
Society as a whole	X		X	X

Source: created by the author

Benefits to companies from CSR

Generally speaking, the activities in the field of CSR include internal and external components. Internal corporate social policy for employees includes the formation of corporate culture, training of personnel, health care personnel etc. The external corporate social policy is aimed at the local community on the territory of the enterprise. The external corporate social policy is manifested in the participation of businesses in a variety of external social projects (Federal and regional).

Modern trends in the development of CSR in Russia are based on social public policy that focuses on the formation of political and social stability in the country, liability under labor and tax laws. The business community continues to adhere to the anachronistic concept oriented to the maximization of profit [Bondarenko, Tannin, Yudin, 2014].

Socialization goals of world business creates a new target setting for enterprises (companies, firms) which is carrying out production and business activities, focusing primarily on human values, implementing the concept of corporate social responsibility, and only secondarily on the needs of the market for high quality goods and services due to consumer demand.

It is possible to identify some trends that emerged against the background of increasing social responsibility of corporations:

1. The reduced role of the state. In many countries, especially small and developing (i.e. where the state is unable to bear the burden of social responsibility), the responsibility of environmental issues, human capital development, almost completely lies on large multinational corporations.

2. Increasing demands from consumers. More and more corporate and private consumers to go for a long-term relationship with some companies in a belief in the "social reliability" of the supplier and it does not harm nature, does not violate the nature of a man.

3. The allocation of responsibility between partners and pressure investors. Many socially responsible companies are tracking below their production chain was not socially irresponsible partners, as this may damage their image. Strong pressure on them to have and socially responsible investors are using their shareholder rights to change the policy companies. There are cases of mass activists buying up stakes unreliable companies in order to gain access to its management and reorientation.

Designed and effectively operate system of CSR allows companies not only to make a positive contribution to social well-being and environmental stability, but also contributes to the effectiveness and sustainability of the business.

The most tangible effect of the introduction of CSR has on the growth of intangible assets, increased reputation and brand. Indirect evidence of the positive impact of CSR on business performance is also the fact that most of the world's largest corporations at the same time occupy a leading position in CSR. Even though to trace the direct relationship between CSR and financial performance is difficult, such attempts are regularly being made.

Some areas of CSR are equally important to all organizations. For example, a responsible behavior towards its staff or reducing the negative environmental impacts, including the organization of "green office". Other areas of CSR can be very important for some organizations, but be irrelevant to others.

CSR of RUSAL

RUSAL has a code of corporate ethics, which was adopted in 2005. The Code protects the rights of employees and aims to [Code of Corporate Ethics…accessed February 27,2017]:

1. Give each employee an idea of the mission, values and principles of the company's activities.
2. Set standards of ethical behavior that determines the relationships within the team, relationships with customers, business partners, government, public and competitors.
3. Serve as a tool to prevent possible violations and conflict situations.

RUSAL also implements some social programs to support the socio-economic development of single-industry towns. However, despite RUSAL efforts, some single-industry towns remain degraded.

RUSAL has its own center for social programs (TSSP), acting as a charitable Foundation. This center has been working for 10 years since 2004, carrying out its activities as a center of expertise in the field of advanced social technologies, corporate philanthropy and volunteerism in the regions where the enterprises of RUSAL. Table 9 provides a list of all social programs that are being implemented by RUSAL. What is more, next to each program there is a list of single-

industry towns where these programs are implemented. The list of single-industry towns is divided into two groups based on the “Basic Element” classification.

Thus, the company is trying to develop differen social programs, which should help to provide social support and assistance in single-industry towns. However, they cannot get some cities out of degradation status. Moreover, although the center appeared in 2014, all the listed programs began to gain momentum only in the last three years.

Table 9. Key social investment programmes

Program	Tasks of the program	Example	The level of development single-industry towns
The Territory of RUSAL	• To significantly improve the quality of life of people; • To create and rehabilitate social infrastructure facilities and urban environment by supporting social projects in education, culture, sports and recreation.	In 2014 were implemented 88 programs. - The opening of the Park for young people (Krasnoyarsk) - Set up a special site as part of remedial programs for children with disabilities, which is unique in the city (Achinsk) - Municipal center of children's technical education received the robotics lab (Novokuznetsk) - Sports and ropes course (Krasnoturinsk)	**Dynamic city** Sayanogorsk Novokuznetsk Severouralsk Kamensk-Uralskiy Krasnoturinsk **Degraded city** Shelekhov Nadvoitsa
Every little helps	• To solve social problems with help from corporate volunteers and partner organizations; • There is Internet portal “Just to Help” contributed to the unification of volunteers and charitable organizations interested in joint social activities.	- Visiting orphanages - Organization of events for children - Training courses for law-abiding people - Environmental Action "Day of the Yenisei" - Charity marathon "We believe in a miracle; we create a miracle!"	**Dynamic city** Sayanogorsk **Degraded city** Shelehov

Program	Tasks of the program	Example	The level of development single-industry towns
Social entrepreneurship	• To create good opportunities for the involvement of the most active groups of the local population in solving social problems in the city • To coordinate participation of all available national and regional resources to achieve these goals	- School of Social Entrepreneurship - Social business projects - The program of preferential crediting of social projects (Krasnoyarsk) - Interest-free loans for the implementation of projects of graduates of the School of Social Entrepreneurship	**Dynamic city** Kamensk-Uralskiy Krasnoturinsk Severouralsk **Degraded city** None
Formula of the future	The programme is implemented by the interaction and communication of young participants representing the different departments of the Company. The program helps youth to realize their potential in a variety of activities outside the production sector	- 9 youth councils have been set up at enterprises - Introduction of innovative technologies - Social and volunteer activities - Training courses and seminars on the implementation of social activities and projects	**Dynamic city** Sayanogorsk Novokuznetsk Kamensk-Uralsky Severouralsk **Degraded city** Shelekhov

According to: [Official report of UC RUSAL, 2014]

At the moment, CSR is an integral part of the business. However, in addition to determining the importance of CSR, it is necessary to understand how town-forming enterprise should manage their CSR activities in order to use' their resources to deliver the greatest improvement in social outcomes. This is surprising given the substantial sums that are being invested by corporations in CSR, the potential benefits for both corporations and local stakeholders, the rising levels of expectation surrounding CSR and its potential to encourage economic regeneration, and the level of effort devoted to persuading corporations to consider themselves 'citizens' with rights and responsibilities in relation to a range of stakeholders. It is perhaps even more surprising given that CSR is all too often poorly directed, unfocused, and ineffectual in generating social benefits [Lamar, 1997].

Nowadays social programs provided by RUSAL are not enough to maintain and develop a single-industry town. That's why town-forming enterprise should implement other more coordinated measures. To determine these measures, it is necessary to understand what factors and how affect on single-industry town development.

2.2. Best practices of corporate social responsibility for urban development

In the previous section it was determined that the town-forming enterprise can improve life in single-industry cities by performing CSR. Further it is necessary to consider real examples of the intervention of the corporate sector in the city development. In this section will be discussed several case studies about the interventions of companies in the development of the city/country through CSR.

CSR in Sri Lanka

Sri Lanka is a country located in South Asia, which refers to developing countries. According to the World Bank report (2014) around 80% of the population in Sri Lanka lives in rural areas and 90% are considered poor [World Bank, 2010].

In Sri Lanka 3 parties play a great role in providing the basic human needs: voluntary, non-government organizations and corporate sector. Corporate philanthropy is very popular in this country, as far as a lot of companies are trying to support various needs of the society. There are several forms of CSR activities in Sri Lanka as philanthropic and charitable activities, environmental conservation, corporate sponsorships and public awareness [Ariyabandu, Hulangamuwa, 2002]. Most companies prefer to deal with community development, due to the fact that CSR related activities provide competitive advantage and corporate reputation leading to better performing share prices [Husted, Allen, 2007].

First of all, companies prefer to engage in CSR activities related to unemployment,

health, entrepreneur development, education, provision of infrastructure facilities and employee welfare. In order to reduce unemployment there are vocational training to youths. Another popular area of activity is environmental issue such as reduction of greenhouse gas emissions, reducing the pollution associated with poverty and cleaning beaches. Some companies prefer to provide people with water and sanitation. All this activity contributes to the development of the country. By means of CSR, the percentage of illiterate people decreases, more people have the opportunity to receive timely medical care and young people can get a good education [Heenetigala, 2011].

CSR in Greece

Greece is a country that has been facing difficulties in its political and social system in the last two decades. In this time of the economic crisis, enterprises address some of the major problems like unemployment, poverty, and environmental pollution. The tool to help deal with some of these problems is Corporate Social Responsibility [Metaxas, Tsavdaridou, 2012]. It should be noted that in Greece several barriers made it difficult for the CSR to emerge earlier: corruption (Greece is ranked 50^{th} out of 133 countries in the Corruption Perceptions Index) and it is very difficult to develop responsible behavior by the companies along with the help of NGOs.

There are several big companies in Greece, which are engaged in CSR: Public Power Corporation (PPC), Public Gas Corporation (DEPA) and Hellenic Petreleum (see Table 10). These public companies are the largest in the energy sector and play a key role in the production of energy in Greece. The first two companies were involved in the implementation of CSR projects in Athens, and the third in Thriassion.

Table 10. CSR in Greek companies

	PPC	**DEPA**	**Hellenic Petreleum**
CSR goals	• to create jobs; • contribution to the development of the national economy; • to offer district heating possibilities; • to sponsor socoal and cultural activities; • to deal with special events; • to support universities;	• to reduce the impacts of the company on the landscape; • to preserve the natural resources; • to improve the residents' quality of life;	• contribution to the Society; • take care aboit employees • optimization of Operations; • care for the Environment.
CSR activities	1. Help after earthquake in Athens; 2. The Athens 2004 Olympic Games; 3.Construction of electrical networks, electrification of the island of Gavdos; 4. Helped to reduce pollution.	1. Organization of sporting events for young people; 2. Training programs for employees; 3. Scholarships for study in higher educational institutions.	1. Free food provision to destitute families at Thriassion; 2. Donation of equipment for medical tests to the Eleftherio-Kordelio's Elderly Leisure-Time Center.

According to: [Metaxas & Tsavdaridou, 2012]

These cases are good examples of how to invest in CSR and what problems need to be addressed first. The Greel companies in case of disaster struck throw all their resources to help victims. In the case of a major event, companies are also trying to help conduct it on a no-cost basis (the Olympic Games). Moreover, these cases confirmed that there are a number of problems that are common to all: high level of unemployment, environmental pollution and the underdevelopment of small and medium-sized businesses.

Thus, CSR plays an integral role in the development of society. In order to achieve results from CSR activities it is necessary to correctly identify the problems of the country or city, and then consider possible solutions to these problems within existing enterprise resources.

CHAPTER 3. ANALYSIS OF FACTORS OF SINGLE-INDUSTRY TOWNS DEVELOPMENT

3.1. Description of the methodology

Description of the sample

As it was discussed above, the impact of CSR on urban development in single-industry towns is underestimated. In order to determine the influence of CSR on the level of a single-industry town's development, this study explores a sample of 19 cities of RUSAL, from which were chosen only single-industry towns (see Appendix 1). They are: Belogorsk, Kamensk-Uralskiy, Krasnoturinsk, Nadvoitskoe, Novokuznetsk, Polevskoy, Sayanogorsk, Severouralsk, Shelekhov and Yaroslavskoe. Only 7 single-industry towns were selected from these 10 because there is no data about Nadvoitsa, Shelehov and Yaroslavskoe.

RUSAL was chosen for several reasons. First, some company's plants are based in single-industry towns, where RUSAL is a town-forming enterprise. Second, RUSAL is included in the list of socially responsible enterprises, which comprises such organizations as «Expert-400» and «Responsible Leadership». And the last factor is that RUSAL one of the most profitable companies and then it should have money for CSR.

The analysis is based on secondary data for 2011-2015, which is available on the website of the Federal State Statistics Service (ROSSTAT).

This is a quantitative study using regression analysis to analyse, which indicators influence on the dynamic development of single-industry towns. Regression analysis is «the most widely used statistical tools for discovering the relationships among variables» [Draper, Smith, 1981].

In order to build a regression model were considered the indicators presented in Figure 7. As can be seen from the figure, they were divided into four groups: population structure, employment, financial engagement and social programs. A brief description of all the indicators is presented in Appendix 2.

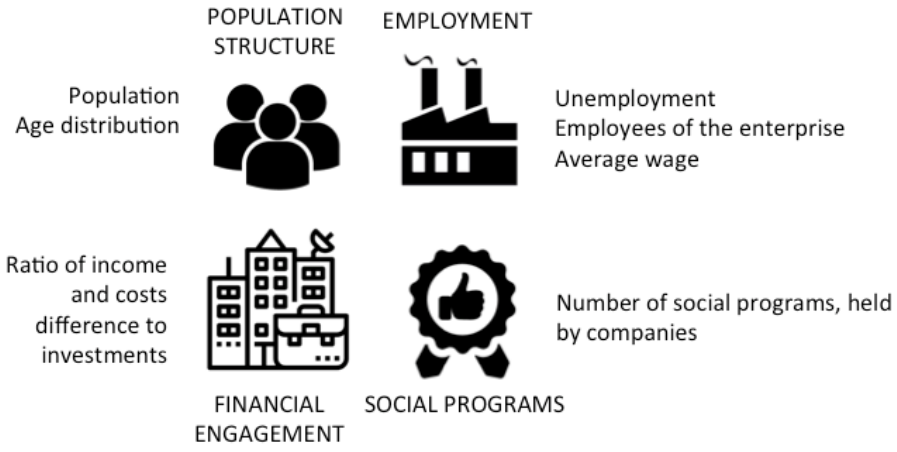

Figure 7. Four groups of indicators

Source: created by the author

Not all of the presented indicators were included in the regression, as some of them strongly correlate with each other and the model gives a distorted result. Also in the first group there is an indicator the age structure, which includes share of children and retirees in single-industry towns. The share of children does not bear any information. But the share of retirees living in the city suggests that if there are not enough of them, then the burden on the budget is lower and the proportion of the working-age population is higher. That's why the probability that the city will develop dynamically is higher

The following indicators were excluded: population and children. The remaining indicators were included in the regression as independent and control variables.

3.2. Model design and hypotheses testing

Model design

Based on the analysis of the first two chapters were formulated three hypotheses:

H1: Reduction of unemployment in single-industry towns contributes to the dynamic development

H2: The increase in the number of social programs from the town-forming enterprise contributes to the dynamic development of the city

H3: The increase in the share of employed in the town-forming enterprise contributes to the dynamic development of the city

To identify the direction of the future CSR in single-industry towns was built one model. Since it is panel data, so pooled regression was selected.

$$Y = \beta_0 + \beta_1 Unemployment + \beta_2 SocialP + \beta_3 EntEmployment + \beta_4 Ratio + \beta_5 Retirees + \beta_6 \ln(Average\ wage) + \varepsilon_i,$$

where

Y – level of single-industry town development;

β_n – explanatory variables;

n – number of variables.

Explanatory variables are presented in 13.

Dependent variable

In order to test the hypotheses, a binary variable was chosen as dependent: the level of single-industry town development (1-dynamic, 0-degraded). By the dynamic development of single-industry town means a city with high socio-economic indicators.

In the first chapter, the most two well-known classifications of single-industry towns were studied in detail: Russian government's classification and "Basic element" classification.

Firstly, based on the Russian government's classification were distributed single-industry towns of RUSAL. As a result, 6 single-industry towns out of 10 are in a critical socio-economic situation, two are on the verge and only Belogorsk and Novokuznetsk have stable development (see Table 11).

Table 11. Russian government's classification

Stable single-industry towns	**A risk of deterioration in the social and economic situation**	**Critical condition**
Belogorsk Novokuznetsk	Sayanogorsk Polevskoy	Shelehov Kamensk-Uralskiy Severouralsk Krasnoturinsk Nadvoitsa Yaroslavskoe

According to: [Resolution of the Government of the Russian Federation, 2014]

The classification presented by the group of companies "Basic Element" includes two main criteria: 1) development of the single-industry town; 2) development of the town-forming enterprise. According with these criteria were classified single-industry towns of RUSAL (see Table 12). All calculations and data are presented in Appendix 3 and Appendix 4. As a result: 4 single-industry towns are classified as dynamic; two are able to survive independently of the

town-forming enterprise; 1 has a developed enterprise, but a degraded city and 3 classified as degraded single-industry towns.

Table 12. “Basic element” classification (data for 2015 year)

Dynamic city	**Dynamic city**	**Degraded city**	**Degraded city**
Dynamic enterprise	**Degraded enterprise**	**Dynamic enterprise**	**Degraded enterprise**
Severouralsk Krasnoturinsk Novokuznetsk Sayanogorsk	Kamensk-Uralskiy Polevskoy	Belogorsk	Nadvoitsa Yaroslavskoe Shelehov

According to: [Basic Element, 2015]

The “Basic Element” considers the role of the town-forming enterprise, but only from the point of its development. While the proposed further ways of single-industry town’s development, which were presented in the first chapter, do not include the actions from town-forming enterprise.

The distribution of single-industry towns between these two classifications gave contradictory results (see Figure 8). It is assumed that both classifications used a different method of assessing socio-economic indicators. However, since they do not take into account the role of the town-forming enterprise, it is not possible to determine the directions of the company's intervention in the single-industry town development.

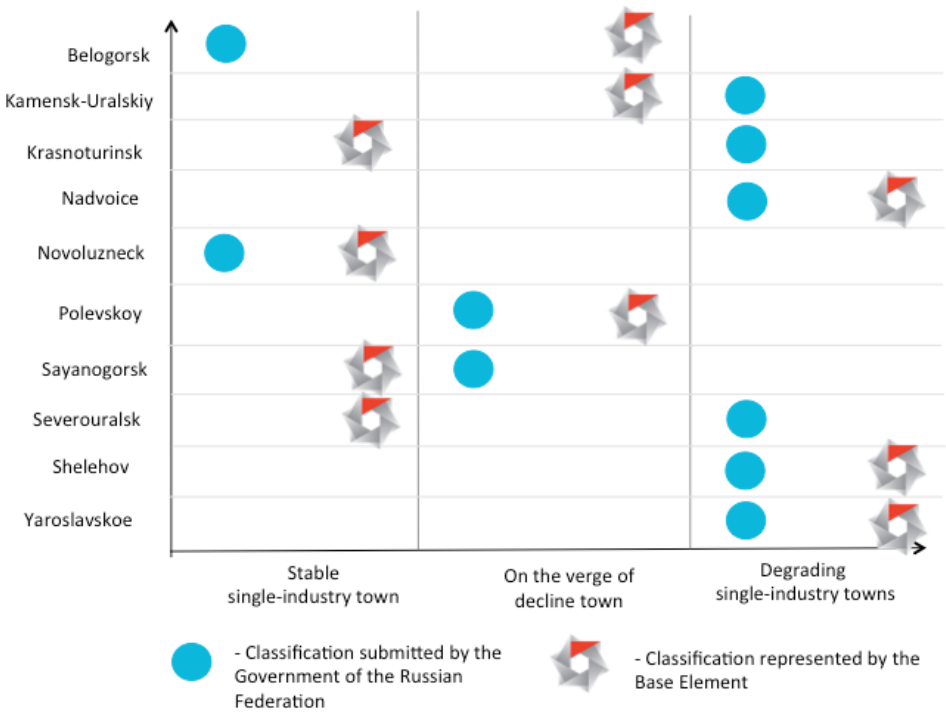

Figure 8. Distribution of single-industry towns among two classifications
Source: created by the author

This classification will be taken for regression model, because: it is insignificant, but takes into account the role of the town-forming enterprise; the "Basic Element" in its study used not only secondary data, but also primary data. Based on these two reasons the classification presented by the "Basic Element" gives a more correct distribution of single-industry towns in terms of their development level.

Independent variable

Unemployment

Under unemployment here means unemployment rate. It defines unemployed people as those who are willing and available to work, and who have actively sought work within the past four weeks. Those with temporary, part-time or full-time jobs are considered employed, as are those who perform at least 15 hours of unpaid family work.

To calculate the unemployment rate, the number of unemployed people was divided by the number of people in the labour force, which consists of all employed and unemployed people. The ratio is expressed as a percentage.

$$\frac{Unemployed}{Labour\ force} * 100\%$$

Number of social programs

In this case means the programs provided by RUSAL to support, develop and improve the social and economic performance of the city. Also, these programs are designed to fulfil their social obligations to society as a whole. RUSAL implements four social programs.

Enterprise employment

The main specific of single-industry towns is that more than 20% of the working population work for town-forming enterprise. This indicator shows the share of the working population that works for the RUSAL.

To calculate the enterprise employment, the number of people employed by enterprise is divided by the number of all employed people in the city. The ratio is expressed as a percentage.

$$\frac{People\ employed\ by\ enterprise}{All\ employed\ people} * 100\%$$

Control Variables

In addition to dependent and independent variables, there are so-called control variables that must be included in the model for completeness of the study. In this case control variables are: Retirees, Average wage and Ration of income and costs difference to investment.

The summary of methodology is presented in the table below.

Table 13. Measures of regression model

Dependent variable	**Measure**	**Source**
The level of single-industry city development	Binary: 1- dynamic city, 0- degraded city.	Basic Element
Control variables		
Retirees	Retirees as a percentage of the total population (%)	Rosstat
Average wage	The average wage in the city (rubles)	Rosstat
Ratio of income and costs difference to investment	Ratio of income and costs difference to investment	Rosstat
Independent variables		
Unemployment	Unemployment rate (%)	Rosstat
Social programs	Number of social programs	RUSAL official web-site
Enterprise employment	The percentage of people working on the enterprise (%)	Rosstat

Source: created by the author

3.3. Empirical results

Model is estimated with level of development as a dependent variable. Table 4 presents the results for this model. F-statistics and p-value show (F = 46,2, p-value = 0,000) that the model is statistically significant.

Table 14. Regression analysis

	Sum of Squares	df	Mean square	F	Sig.
Regression	3,863	6	0,644	46,2	0,000
Residual	0,423	28	0,015		
Total	3,286	34	0,126		

Source: created by the author

R square in table 15 shows that the model explains 90% of variation in the dependent variable.

Table 15. Summary of regression model

R Square	Adjust R Square
0,90	0,88

Source: created by the author

Table 16 shows the results of the model. Among the variables only three turned out to be significant: unemployment rate, social programs and enterprise employment.

Unemployment rate have significant impact on the level of single-industry towns development. The relationship of this variable with the level of single-industry town's development is negative ($\beta = - 0,165$) that indicates that H_1 is to be accepted.

Social programs implemented by RUSAL is also a significant factor ($p < 0,05$), the relationship of this variable with the level of single-industry town's development is positive ($\beta = 0,112$) that indicates that H_2 is to be accepted.

Another important factor is enterprise employment. This factor is found to be significant ($p < 0,05$) for the level of single-industry town's development, so H_3 is to be accepted.

Table 16. Coefficients of regression model

Development	Coefficients	Std. Err.	t	P > |t|	[95% Conf.Intervall]	
Const	3,567	2,222	1,6	0,120	-0,986	8,12
Unemployment rate	-0,165	0,062	-2,6	0,013	-0,293	-0,038
Social Programs	0,112	0,022	5,05	0,000	0,066	0,158
Enterprise employment	0,009	0,003	2,98	0,006	0,003	0,015
Ratio	1,304	3,007	0,43	0,668	-4,855	7,47
Retirees	0,01	0,008	1,35	0,188	-0,005	0,025
Ln(Average wage)	-0,311	0,202	-1,55	0,133	-0,725	0,101

Source: created by the author

Regression model is presented below:

$$Development = 3{,}567 - 0{,}165Unemployment^{*} + 0{,}112SocialP^{***} + 0{,}009EntEmployment^{*} + 1{,}304Ratio + 0{,}01Retirees \quad - 0{,}311 \ln(\text{Average wage}) + \varepsilon_i$$

As a validation of the model was decided to look on correlation coefficients between variables.

Table 17. Selective correlation coefficients between variables

	Development	Unemployment	Social Programs	Employment	Ration	Retirees	LAW
Development	1,000						
Unemployment	-0,6892*	1,000					
Social Programs	0,6088*	-0,0649	1,000				
Employment	0,8457*	-0,7442*	0,3125*	1,000			
Ratio	0,7688*	-0,659*	-0,5062*	0,7301*	1,000		
Retirees	0,4998*	-0,4132*	0,2518	0,3737*	0,3708*	1,000	
LAW	-0,5207*	0,2638	-0,2170	-0,5423*	-0,1988	-0,2686	1,000*

Source: created by the author

The stars in the matrix denote significant correlation dependencies. According to the results not all relationships are significant. Since there is no correlation dependencies, where the pairwise correlation coefficients between the variables are greater than 0.8, so none of the variables in this model should be excluded.

With the help of the regression, three directions were identified for the single-industry town's development with help of the CSR. The greatest impact on the dynamical development of the single-industry towns is caused by a decrease of the unemployment rate (with a probability of 0.165). Then goes the increase in the number of social programs (with a probability of 0.112). And the smallest probability (0.009) has the increase of the employees share. Based on this it is possible to make recommendations about further directions of CSR in single-industry towns.

CONCLUSION AND RECOMMENDATIONS

The following factors, which have an impact on possibility for single-industry towns to develop dynamically, were identified:

- Unemployment.
- Number of social programs held by the town-forming enterprise.
- Proportion of the population employed by the town-forming enterprise.

Based on these factors, three CSR directions were proposed:

1. To hire those people, who were unemployed for a long time.
2. To help people to move to another city if they are hired by RUSAL department, which is situated in another single-industry town.
3. To support small and medium business.

The interconnection between the factors, chosen by means of regression analysis and the recommendations proposed is shown in figure 9.

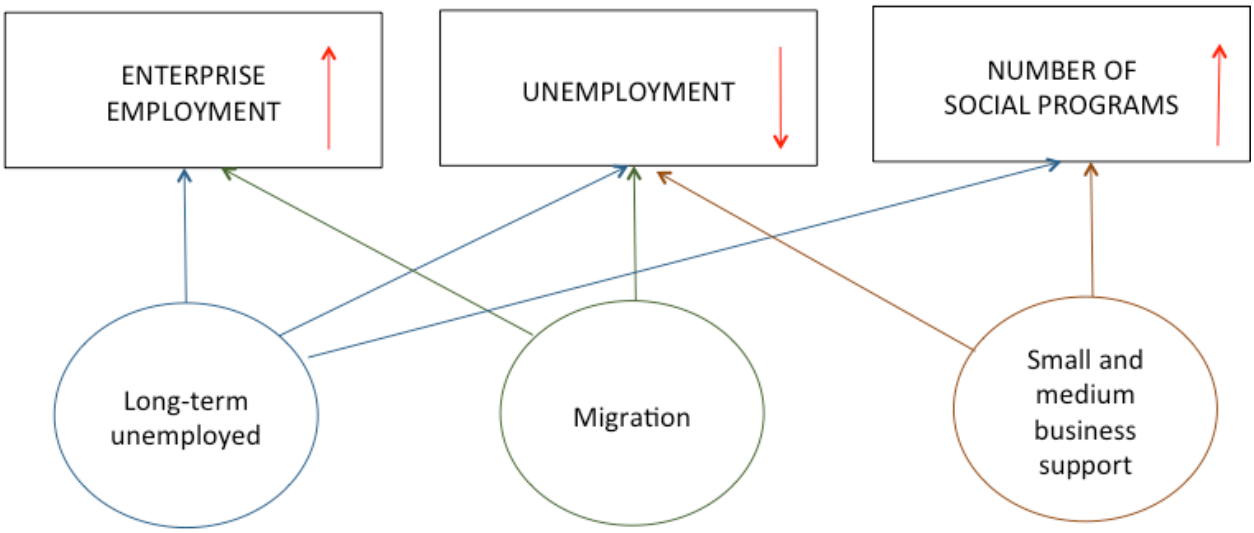

Figure 9. CSR directions for single-industry towns support
Source: created by the author

1. Focus on long-term unemployed

The biggest part of unemployed population is not young professionals, but middle-aged people who can not find a job for a long time. The probability to find a job for this category of people is lower, than for the young professionals. Based on this in 2014 Deloitte in collaboration with Rockfeller Foundation [A guide to recruiting and hiring…, 2014] created a handbook dedicated to hiring long-term unemployed. This handbook describes reqruitment lifecycle for long-term unemployed, which is different from the usual hiring of employees. For example, there are excluded such issues: questions about the last place of work, achievements and some

tests. Deloitte experts believe that if the company stops to be afraid to hire people who are long-time unemployed, it will sharply reduce the unemployment rate.

This measure will help to reduce unemployment rate. In turn, lowering the unemployment rate and hiring a long-term unemploeed increases the proportion of employees of the enterprise. If the company increases the number of implemented social programs, this direction can also be considered, since the company can hire long-term unemployed for new programs.

2. Migration

Not all unemployed citizens can financially afford to change their place of residence from one city to another. That's why they look for a job in their hometown, while they can be sussefully hired in another town by the brances of the the same company, as they worked in before being fired. In this case, the town-forming enterprise could issue grants for resettlement between RUSAL cities for those citizens who: (1) have no money for migration; (2) already found a job in another city; (3) are ready to move to another city with their family.

Thus, migration can also decrease unemployment rate and increase the proportion of employees of the enterprise.

3. Small and medium business support

Small and medium-sized business is very important for city development. This is especially important for single-industry towns, where a large part of the population is involved in the town-forming enterprise and the other business is not developed. Moreover, small and medium-sized business helps to create new jobs and reduce unemployment rate.

A town-forming enterprise can create training agencies for future entrpreneurs. It is possible to refer to the experience of "Severstal", which was engaged into the subsequent activities together with the local authorities in Cherepovets in 1999 [Paramanova & Davidova, 2017]. The task of the city government was to organize educational programs, where the company's experts advised the citizens how to create and run their own business and also help them to find investors. It became one of the sussed factors in Cherepovets development: since 2013 is not considered as single-industry town anymore.

The support of small and medium business also helps to decrease unemployment rate. What is more, small and medium business may help RUSAL with realization of social programs.

The results:

- The town-forming enterprise contributes to the development of single-industry towns;
- The main factors of dynamic development of single-industry towns are reducing unemployment, increase in the number of social programs and increase in the proportion of the population employed in the town-forming enterprise;

- Unemployment has the greatest impact on the dynamic development of the single-industry towns;
- The following CSR directions are proposed: recruit long-term unemployed, migration and development small and medium business.

Research limitations

The recommendations given in the work may not fully correspond to reality because:

1. In this study secondary data were used.
2. One enterprise (RUSAL) was considered.
3. There was no opportunity to interview RUSAL.
4. There was not enough data in ROSSTAT.

Appendix 1. RUSAL plants

Name of the City/township	Type	RUSAL	Business activity
Achinsk	City	«The Achinsk alumina refinery»	Manufacturer of alumina
Belogorsk	Single-industry town	«Kiya-Shaltyrsky nepheline mine»	Extraction
Boksitogorsk	City	«The Boksitogorsk alumina refinery»	The production of corundum products
Bratsk	City	«Bratsk aluminum plant»	Production of aluminium
Volgograd	City	«Volgograd aluminum plant»	Production of aluminium
Volhov	City	«Volkhov aluminum plant»	Production of aluminium
Kamensk-Uralskiy	Single-industry town	«Ural aluminum plant»	Manufacturer of alumina
		«Silicon-Ural»	The production of silicon
Kandalaksha	City	«Kandalaksha aluminum plant»	Production of aluminium
Krasnoturinsk	Single-industry town	«Theological aluminum plant»	The production of alumina and aluminum projectors
Krasnoyarsk	City	«Krasnoyarsk aluminum plant»	Production of aluminium
Nadvoitsa	Single-industry towns	«Nadvoitsky aluminum plant»	Production of aluminium
Novosemeykino	Township	«RUSAL Resal»	Recycling aluminum
Novokuznetsk	Single-industry town	«The Novokuznetsk aluminum plant»	Production of aluminium
Polevskoy	Single-industry town	«Polevskoy cryolite plant»	Production
Sayanogorsk	Single-industry town	«The Sayanogorsk aluminum plant»	Production of aluminium
Severouralsk	Single-industry town	«Severouralsk bauxite mine»	Bauxite mining
Taezhniy	Township	«Boguchansky aluminum plant»	Production of aluminium
Tayshet	City	«Taishet aluminium smelter»	Production of aluminium
Shelehov	Single-industry town	«Irkutsk aluminum plant»	Production of aluminium
Yaroslavskoe	Single-industry town	«Yaroslavl mining company»	Extraction

Source: created by the author

Appendix 2. Description of indicators

Group	Indicators	Description	Measure
Population structure	Population	Number of inhabitants of the city	Number of people
	Children	Children as a percentage of the total population	%
	Retirees	Retirees as a percentage of the total population	%
Employment	Employment	The number of people who are actually employed regardless of age	Number of people
	Unemployment	The percentage of people unemployed	%
	Employees of the enterprise	The percentage of people working on the enterprise	%
	Average wage	The average wage in the city	Rubles
Financial engagement	Ratio of income and costs difference to investment	$\frac{Income-Costs}{Investment}$, where **Income** – local budget revenues **Costs** – local budget expenses **Investment** - fixed assets carried out by organizations located on the territory of the municipality	Coefficient
Social programs	Number of social programs, held by companies		Number of programs

Source: created by the author

Appendix 3. Socio-economic development of RUSAL single-industry towns (2015 year)

Single-industry towns	Investments in fixed capital by organizations	Income	Costs	The permanent population (end of 2015)	Change in population from 2010 to 2015	Percent employees of organizations	The unemployment rate	The average wage	Conclusion
Units	**Rub./ 1000 people**	**Rub./ 1000 people**	**Rub./ 1000 people**	**Thousands of people**	**Thousands of people**	**%**	**%**	**Rub.**	
Belogorsk	5146242,61	1490467,74	1712481,1	67687	-970	25	2,2	38750,3	Degraded
Kamensk-Uralskiy	18166284,84	3886852,5	3886852,5	172749	-2249	31	1,7	30530	Dynamic
Krasnoturiyinsk	1976214,2	1779741	1754225	63790	-973	27	1,6	30702	Dynamic
Nadvoice	195951	24633,84	23914,02	7998	-359	25	2,76	34235,6	Degraded
Novokuzneck	14024965,44	191542,8	1867038.24	50406	-231	46	1,6	37827,6	Dynamic
Polevskoy	2377741,73	1595989,4	1624237	70619	-448	24	1,1	30410,1	Dynamic
Sayanogorsk	6508760	1050900	1091200	62000	-1322	26	1,82	38020,2	Dynamic
Severouralsk	1520146,32	1334126,2	1430924	42086	-1861	27	1,7	29654	Dynamic
Shelehov	1882206,24	1022099,7	1033670,64	64283	1856	43	3,42	28241	Degraded
Yaroslavskiy	13218,16	30183,2	30807,68	10408	-690	41	2,5	28325,7	Degraded

Source: ROSSTAT

Appendix 4. The level of development of enterprises in single-industry towns RUSAL

Enterprise	Single-industry towns	The year of foundation	The main activity	Key events	Conclusion
Kiya-Shaltyrsky nepheline mine	Belogorsk	2002 year	Production of nepheline ore	1. In 2008, the capacity was 1.069 million tons 2. Purchase of new equipment in 2008 3. The production in the second quarter of 2016 increased by 8.8% compared to the previous quarter - up to 1 208 thousand tons	Dynamic company
Ural aluminum plant	Kamensk-Uralskiy	1939 year	The production of alumina – parallel method Bayer-sintering	1. In 2014, it was adopted by the region to invest in the factory for three years, 25 billion rubles and to grant tax benefits in the amount of 1.88 billion rubles. 2. Investments of RUSAL in the modernization of production 3. In 2015 there is a new product – silicon with an iron content of 0.25% 4. Improving technology	Degraded enterprise
"Silicon-Ural"		1998 year	The production of metallurgical silicon	1. Start of production of refined silicon 2. Capacity is 27 thousand tons	ded enterprise
Theological aluminum plant	Krasnoturiynsk	1943 year	The production of alumina, the trihydrate of aluminum oxide, silicate-lump sadalita	1. Capacity is 960 thousand tons of alumina per year 2. Reconstruction of the plant and the introduction of new technical developments	Dynamic company
Nadvoitsky aluminum plant	Nadvoickoe	1954 year	Production of primary aluminium, aluminium	1. The capacity of 24 thousand tons of aluminum 2. Launch in 2016 the production of radiators 3. Increasing the production	Degraded enterprise

Enterprise	Single-industry towns	The year of foundation	The main activity	Key events	Conclusion
			alloys		
The Novokuznetsk aluminum plant	Novokuznetsk	1943 year	Production of primary aluminium, aluminium alloys	1. The capacity of 215 thousand tons per year 2. Modernization of the foundry Department 3. The construction of the processing technology of the pots	Dynamic company
Polevskoy cryolite plant	Polevskoy	1907 year	Production of aluminum trifluoride	1.Launched the program to increase environmental safety of production 2. Technology modernization 3. Increase production of aluminum trifluoride up to 70 thousand tons per year	Degraded enterprise
The Sayanogorsk aluminum smelter	Sayanogorsk	1985,2006 year	Production of primary aluminium, aluminium alloys	1. Capacity 542 thousand tons per year 2. Increase of efficiency at the enterprise 3. RUSAL's investments in modernization of production 4. Improving Technology 5. Installation of new gas cleaning devices 6. In 2014, the increase in the volume of the alloy 7. Manufacture of ingots for automotive bodies	Dynamic company
Severouralsk bauxite mine	Severouralsk	No data	Extraction of bauxite	1. The capacity of 3.4 million tonnes of bauxite a year 2. The start-up of new mines in 2015	Dynamic company
Irkutsk aluminium smelter	Shelehov	1960 year	Production of primary aluminium, aluminium alloys	1. A significant expansion of the company in 2008-2010 year 2. In 2010, the commissioning of new foundry capacity of 165 thousand tons per year 3. The use of new technologies	Degraded enterprise
Yaroslavskiy mining company	Yaroslavskoe	No data	Extraction of ore	The company was suspended from 2013 to 2016	Degraded enterprise

Source: [The official web site of RUSAl and informational portal of Sayanogors, Severouralks, etc.]

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