

PUBLIC-PRIVATE  
PARTNERSHIP AS A LEVER  
FOR ECONOMIC  
DEVELOPMENT

Case Company: ROSATOM

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ABSTRACT

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This research intends to introduce the concept of a public-private partnership implemented in the Russian environment with the case company and to present a supposed action and development plan for the case company's further activities.

The topicality of the research theme is determined by an increased interest in public-private partnerships in governmental and business circles in the world's leading countries. Today it is becoming more obvious that to ensure a strong and sustainable development of a country, the achievement of strategic goals is impossible without the mutually attractive partnership of the state with private sector companies.

The study is performed inductively with the use of a qualitative method of data collection and analysis. All of the information and knowledge are collected through various sources. Secondary data is acquired from books, journals and publications; tertiary data is collected from Internet resources, while primary data is gathered from interviews with the insiders of the case company. All the information collected and produced is used to compile a development plan.

The analysis of the case company's activities is conducted on the basis of a number of analysis frameworks. PESTel, VMOST, SWOT and Porter's 5 Forces models are used to analyze both internal and external factors in order to accurately evaluate the opportunities and threats.

It is concluded, that the Public-private partnership model (hereinafter – PPP) could improve the financial indicators of the case company and increase its international portfolio, as PPP gives guarantees on proper implementation of the project both technically and legally. This research also outlined the direction for further studies in this field; for instance, the financial side of PPPs could be studied in order to complete the picture on the model's advantages and disadvantages.

Key words: public-private partnership, nuclear energy industry, development plan, unstable economy

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## ABBREVIATIONS

BBO	Buy-Build-Operate
BLOT	Build-Lease-Operate-Transfer
BOMT	Build-Operate-Maintain-Transfer
BOO	Build-Own-Operate
BOOT	Build-Own-Operate-Transfer
BTO	Build-Transfer-Operate
CIS	The Commonwealth of Independent States
D&B	Design & Build
DBFO	Design-Build-Finance-Operate
DBOOT	Design-Build-Own-Operate-Transfer
EU	European Union
HPP	Hydroelectric Power Plant
HSE	High School of Economics, Moscow, Russia
LCC	Life Cycle Contracts
NFC	Nuclear Fuel Cycle
NPO	Non-profit Organization
NPP	Nuclear Power Plant
PFI	Private Finance Initiative
PPP	Public-private partnership
R&D	Research & Development
SPV	Special Purpose Vehicle
TPP	Thermal Power Plant
VMOST	Values, Mission, Objectives, Strategy, Tactics
VVER	Water-Water Energetic Reactor

## 1 INTRODUCTION

In this chapter, the thesis topic is introduced, as well as the author's incentives to conduct the research. First of all, the thesis background, research objectives, and goals are proposed to the reader in order to produce the overview of the thesis and its general understanding. Secondly, the research questions are stated, followed by a theoretical framework, which explains, in brief, the theories adopted in the thesis. Finally, the research methodology and data collection process are explained, and a detailed diagram is drawn as an illustration of the thesis structure.

### 1.1 Thesis Background

Currently, under the unstable economic situation in Russia and the world there is a growing trend to intensify relations between the state and private business in the direction of solving common problems and solutions to the crisis. State functions change, and so do the tasks related to the denationalization of certain sectors of an economy in a country. The proliferation and growing influence of the private sector in the global economy in terms of globalization becomes a distinctive feature of the modern mixed economy. In this regard, an indispensable condition for the proper functioning of an economy is a constructive interaction between business and governmental institutions. (Glazyev 2008.)

Public-private partnership (PPP) - is a particular form of interaction between the state and the private sector in an economy, the fundamental feature of which is the balance of interests, the rights and obligations of the parties in the course of its implementation (Zhilina 2009). The famous researcher V. Varnavskiy (2009) gives another definition of PPP. He states that the modern understanding of PPP - is "institutional and organizational alliance between government and business in order to implement national and international, large-scale and local, but always socially significant projects in a broad range of areas: the development of strategic industries and R&D to provide public services.



However, despite the fact that both the state and business confer big hopes on public-private partnership and considering it as an essential tool for improving national (and regional) competitiveness, the introduction of public-private partnership in many countries' practices is proceeding extremely slowly. The unsettledness of a number of methodological issues of transition to partnerships between the state and business, lack of adequate experience of such a partnership, immaturity of legal and regulatory framework at all levels, as well as the situation of economic instability, are the factors that hinder the implementation of public-private partnership. (Varnavskiy 2005.) All these circumstances and factors make the subject of this study topical and relevant. The concept of public-private partnership and its implementation will be considered and analyzed with the example of the Russian energy company Rosatom.

## 1.2 Research Objectives, Problems, and Questions

The primary step on the way to a well-structured academic research is to define a clear research question. This action should not be underestimated, as its importance defines the future success of the research. (Saunders et al. 2012.) The objectives of this study are to define what public-private partnership is and how to implement this mechanism to achieve steady economic development.

The aim of the research is the identification of the PPP model potential for the implementation in times of unstable economy, taking into account the example of the case company. Also, the development of theoretical and methodological foundations of the PPP mechanism implementation in the energy sector is to be investigated.

In order to facilitate answering the main question – how can PPP lever the company's economic development in Russia - the listed sub-questions below should be replied to by the produced research:

- What are the benefits of public-private partnerships for the parties in terms of an instable economy?

- How does the public-private partnership implementation in foreign countries differ from this model of operation in the Russian Federation?
- What are the problems that hinder the development of public-private partnership mechanisms?
- What are the opportunities and the development directions of the public-private partnership model in Russia?

The object of the study will be a set of processes and phenomena of interaction between business and governmental structures at the level of public-private partnerships.

The subjects of the study are going to be the directions of improvement and development of PPP in the economy in conditions of instability.

### 1.3 Research Methodology and Data Collection

The methodological basis of the study is composed of a complex holistic approach and quantitative research method principles that will reveal the essential characteristics of the processes, forms of their manifestation, and then highlight the inherent contradictions and identify trends in their development. The research is conducted using methods of logical, comparative and statistical analysis, with the implementation of interviews with professionals from the case company Rosatom.

In order to structure the process of the research and data collection, the approach to data analysis and data collection should be chosen. Quantitative method of data collection focuses on data standardizing and its digitization, while the main emphasis of the qualitative method is to understand the phenomena in general (Saunders et al. 2009). In this case, the qualitative data collection and analysis approach is more appropriate.

TABLE 1. Difference between qualitative and quantitative approaches (according to author's thoughts and Saunders et al. 2009)

QUALITATIVE	QUANTITATIVE
<ul style="list-style-type: none"> <li>• Descriptive manner</li> <li>• Small quantity of data</li> <li>• Interviews</li> <li>• Verbal unstructured data</li> <li>• Based on processes</li> </ul>	<ul style="list-style-type: none"> <li>• Numeric-based</li> <li>• Large quantity of data</li> <li>• Surveys, questionnaires</li> <li>• Structured quantifiable data</li> <li>• Based on hard data</li> </ul>

Secondly, the inductive approach to the research has been used. There are two approaches to the study – inductive and deductive. A deductive approach to research is understood as the researcher studies what others have studied, reads existing theories on the phenomenon the researcher wants to investigate, and then tests his/her hypotheses that emerge from those theoretical studies. In contrast, when researcher takes an inductive approach, s/he starts with a set of observations and moves from data collection to theory development. (Blackstone 2012.)

The inductive approach to developing the research is selected and shown in the figure below. It is used in order to build a theoretical framework for the event of PPP, by analyzing the background of it and then creating an understanding of the mechanism and possibilities of its optimal implementation for mutual benefit and economic development in general.

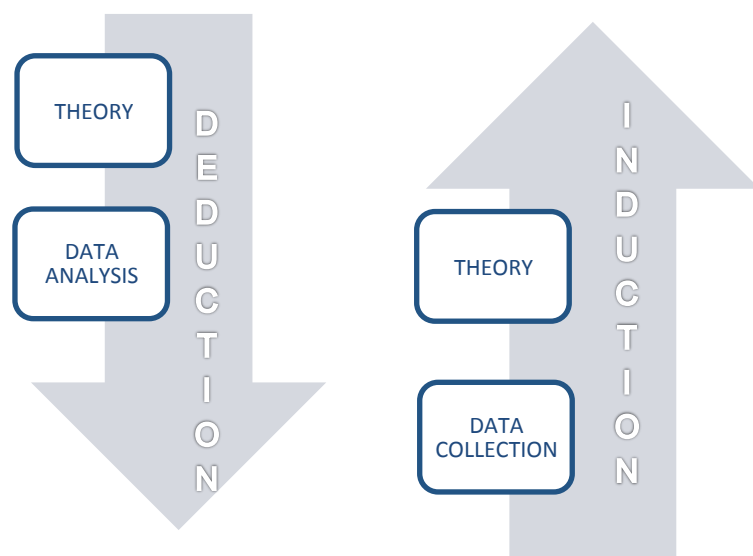


FIGURE 1. Deductive approach vs inductive approach (Blackstone 2012)

To collect information for further analysis, all kinds of sources will be used, for example, primary data will be collected with interviews with the specialists in the corporate relations from the case company Rosatom. Secondary data will be obtained from literature and prior studies of the field of public-private partnerships. Finally, tertiary data to be used in the following research is going to be collected from online resources. (Saunders et al. 2009.)

Furthermore, when conducting any research, the reliability and validity of the information collected are crucial elements, as they determine the accuracy and consistency of the research conducted. The reliability term relates to the sources, where the information used in the research has been retrieved. The sources should be authoritative and acknowledged. Respectively, validity determines if the research has properly answered the research questions. The research is also considered valid if its outcomes could be proven with further research work. (Kananen 2011.)

#### 1.4 Theoretical Framework

In this research, the most important framework to be used is the McKinsey model. This business analysis tool is designed to evaluate the internal processes of the case company and to assess its capabilities to compete on the global market using the public-private partnership model. This framework is based on evaluation of seven “S”s of the company – Strategy, Staff, Shared Values, Style, Structure, Skills, and Systems. (Waterman et al. 1980.) The model will be explained in more detail in the next chapter of this study. Furthermore, in order to accurately give an assessment to the case company’s processes, both internal and external, such analysis tools as PESTel, SWOT, VMOST and Porter’s 5 Forces are to be used. These frameworks evaluate the position of the company on the global market, its sustainability and competitiveness, as well as strong and weak sides of the company’s activities. The outcomes produced by these studies will help to compile the action and development plan for Rosatom.

The theories regarding the event of public-private partnerships will be presented in the thesis as it is shown on the figure below, and will introduce the reader into the concept and help in developing practical planning in the empirical part of the study.

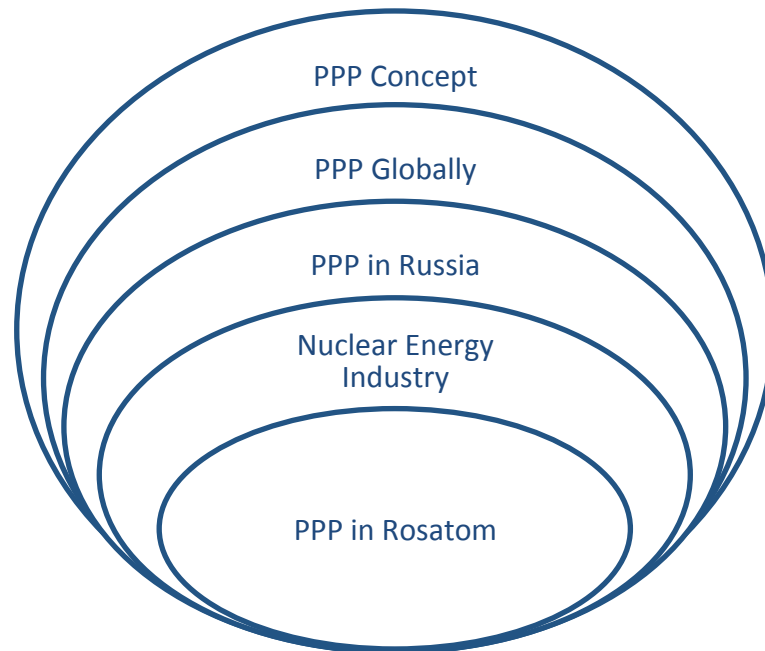


FIGURE 2. Theoretical framework on public-private partnerships

First of all, the concept of public-private partnerships will be introduced in the study, particularly the definition and types of this model. Furthermore, the global experience in the sphere of PPP will be discussed, followed by the examples in Russian experience of PPP implementation. Finally, the case company example will be studied after the introduction to the energy industry specifics.

### 1.5 Thesis Structure

This research is structured as shown on Figure 3, in order to proceed from theoretical findings to the theory development, which will answer the research questions.

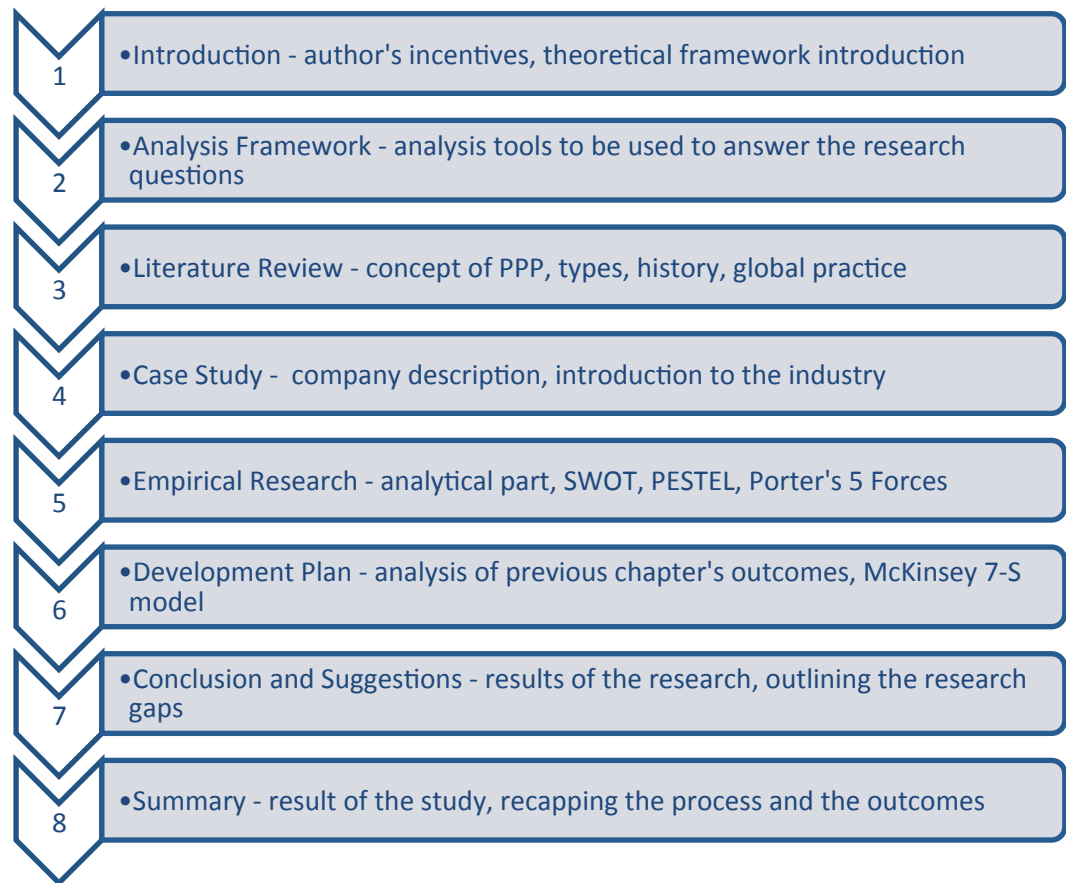


FIGURE 3. Thesis structure

The thesis is divided into two parts: theoretical and empirical. First of all, the research will introduce the reader into the goals of the study, and what results are expected to be achieved. In the second chapter, the analysis tool, which will be used in the thesis, are explained by their nature and their role in answering the research questions. Next, the theoretical component with the main information on the research subject will be delivered, introducing the concept. The fourth chapter is intended to present the case company of the research, on example of which the event of PPP will be analysed. This part will be followed by the empirical research, including analytic work on the company's activities and internal and external analysis of its processes. This chapter is followed by the development plan, aimed to help the company in its future activities in direction of PPP relations. The study ends with the conclusions of the research work made, presenting the results and opportunities for further research of the subject of public-private relations.

## 2 ANALYSIS FRAMEWORK

In this chapter, the analysis tools used in this research will be described in detail, as well as the reasons for their implementation will be explained in relation to the case company and their use in answering the research question.

### 2.1 VMOST

To analyze what an organization has set out as its priorities and how it aims to achieve these goals, VMOST analysis is used. A VMOST provides information of a company's intents and objectives. It is also used in a strategic analysis since it can demonstrate strengths within the organization or expose inherent weaknesses (Cadle et al., 2010).

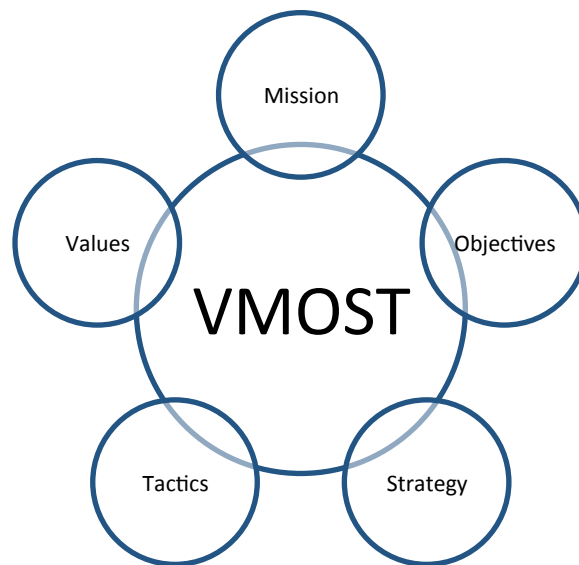


FIGURE 4. VMOST analysis (Cadle et al. 2010)

VMOST stands for Values (the ethical and business priorities of the organization), Mission (the rationale and direction for the organization), Objectives (the goals that the organization aims to achieve), Strategy (the medium- to long-term plans and actions that will enable the organization to achieve its objectives), and Tactics (the detailed, short-term plans and actions that will deliver the strategy). (Cadle et al. 2010.)

## 2.2 PORTER'S 5 FORCES

Attractiveness of the industry in the context of the Porter's 5 Forces model refers to the analysis of the overall industry profitability. This framework is used when making a qualitative evaluation of a company's strategic position on the market (Porter 2008).

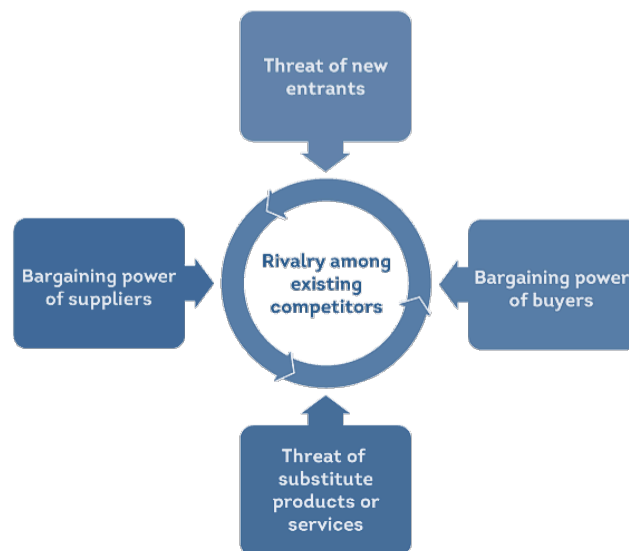


FIGURE 5. Porter' 5 Forces Model (Porter 2008)

The following criteria are to be applied for the analysis of the position of the case company in the industry: rivalry among existing competitors, threat of new entrants, threat of substitution of produced products or services, bargaining power of suppliers, and bargaining power of buyers.

## 2.3 SWOT

SWOT analysis is a strategic planning method implemented to identify the factors of internal and external environment influencing the organization and the division of them into four categories: Strengths (S), Weaknesses (W), Opportunities (O) and Threats (T). Strengths (S) and Weaknesses (W) are the factors of the internal environment in the analysis of the object (the object itself can influence on these factors); Opportunities (O) and Threats (T) are external environmental factors (these factors could affect



the object externally and thus the object cannot influence this force). The object of the SWOT-analysis can be not only the organization, but also other social and economic objects or industries, cities, state and public institutions, scientific spheres, political parties, non-profit organizations (NPOs), persons, etc. (Humphrey 2005.)

In this research, the SWOT analysis is intended to present the strong and the weak aspects of PPP model of interstate relations conducted by the case company in order to compile a development plan for the future.

#### 2.4 MCKINSEY 7-S MODEL

The McKinsey 7-S model (Figure 6) defines the areas of an organisation that have to be improved jointly in order to make a company's processes operate efficiently. The model is used to identify areas that need to change when implementing a new business strategy, and areas that will be affected by proposed business changes. The seven elements of the model are listed below. Shared values element means the values that reinforce the organisation and express the beliefs held by the people who work there. These beliefs compile the mission of the organisation. Skills element implies the skills required to carry out the work of the organisation. Staff element means the staffing requirements for the organisation, including the number and categories of staff. Style element stands for the culture and management style of the organisation. Contrasting examples of styles include 'mentoring manager/empowered staff' and 'commanding manager/instructed staff'. Strategy element means the defined strategy for the organisation. Systems element means the tactical and operational processes that define how the work of the organisation is carried out. This definition should be in line with the organisation's strategy. Finally, the structure element is explained as the internal structures that define the lines of communication and control within the organisation. (Cadle et al., 2010.)

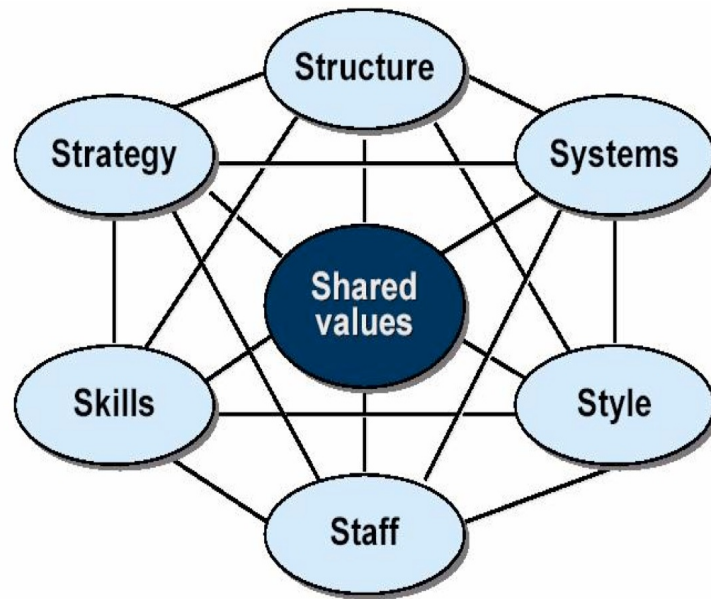


FIGURE 6. McKinsey 7S Model, Cadle et al. 2010

McKinsey 7S model can help improve internal business processes of companies of any size, to increase the productivity of an enterprise, to predict the possible effects of the planned changes to the organizational structure, to guide project divisions properly, and to determine the best way to implement the company's development strategy (Cadle, 2010).

### 3 PUBLIC-PRIVATE PARTNERSHIPS

#### 3.1 Introduction to the Concept

Public-Private Partnership is a set of forms of medium- and long-term cooperation between the state and the business established to solve socially significant problems on mutually beneficial terms (Zitron, 2004). Some developed and developing countries extensively use this relatively new special form of cooperation between the state and private businesses (Khanom, 2010).

This form is based on the weakening of the direct influence of the state in the economy, transferring of functional authority to the private sector and at the same time preserving and strengthening its control (HSE, 2011). The state is a kind of agency for the implementation of socially valuable goods and services. Some parts of these goods it can produce on its own, and the rest is produced by bringing capabilities and capacities of the private sector participants. Business to a certain extent is invited to manage the state assets and to improve the quality and the implementation of governmental projects (Varnavskiy 2009).

The essence of a PPP lies in the fact that on the one hand the state is naturally interested in the strengthening of its budget and increase tax inflows. On the other hand, the private business sector is more than interested in the development of industrial and social infrastructure, creating favorable conditions for its own growth, increasing profitability, and obtaining stability in its development. With this in mind, PPPs can be regarded as a special form of government and business agreements on the principle "business wins if the state wins." Thus, in PPP schemes, benefits and advantages are offered to the private business, and, consequently, opportunities for growth of its revenues, in exchange for participation in the development of industrial and social infrastructure are owned by the state. (Savenkova, 2010.)

For the year 2014, the largest number of new projects worldwide involving private participation were in energy (157), followed by transport (49), and finally water and sanitation (33). Although the energy sector had the biggest number of new projects, the sector with the greatest investment was the transport sector (World Bank, 2014).

Bringing up the above, a significant influence of public-private partnership and its results can be discussed: it is the development of new sectors of infrastructure and society, the flow of investment and the movement of capital in those sectors where there was a kind of stagnation. The development and implementation of technologies, new methods of management and organization take place as well. The partnership of state with the private sector is a critical component of an innovation policy. Because, if it is done right, it provides wider benefits from investment in public research by creating favorable conditions for sustainable development of the innovation as a strategic factor of economic growth.

### 3.2 The Concept and Essence of PPP

Public - private partnership in the world is understood in two ways. Firstly, the system of relations between the state and business, which is widely used as a tool for national, international, regional, city, municipal economic and social development. Secondly, how government agencies and private companies at the sites of state and municipal property implement specific projects jointly (Teisman et al., 2002).

E. Korovin (2006) defines PPP as a medium-term and long-term cooperation between the public and the private sector, within which there is a solution to political problems by combining the experience and expertise of several sectors and sharing the financial risks and benefits.

The concept of PPP is described and analyzed by Professor B. Varnavskiy as follows (HSE, 2010):

1. First of all, the PPP is a form of semi-privatization, which means that the state is transferring the right of management of the objects of infrastructure to the private sector and remains the owner of those facilities;
2. The state unilaterally fulfils its basic functions of population and enterprise sustenance and remains responsible for the operation of infrastructures;
3. In order to ensure an appropriate level of services, a control and regulation system is established to monitor private enterprises' operations;
4. Interaction of the parties in the PPP is based on an official legal basis (agreements, contracts, etc.);
5. In the process of implementation of PPP projects the available assets of the parties (resources and contributions) are combined;
6. All the risks in PPP projects are divided between the state and private business in the proportions according to the mutual agreements stated in the relevant agreements, contracts, etc.;
7. Mostly long-term contractual relationships are maintained. Both the state and the business are interested in entering long-term relationships that enable them to build an economic policy for a prolonged period, to design the development plans and base their activities on long-term mutual obligations (HSE, 2010).

### 3.3 Main Principles of PPP

Forms of a partnership between the state and the private sector differ in the types of services and manufactured goods, the methods used and the legal regime. Nevertheless, they are subject to some general principles aimed at the satisfaction of the public interest. These PPPs as a system of management is fundamentally different from the activities of private commercial organizations focused exclusively on profit. Here are the

fundamental principles of PPP shown on the figure below. (Vecchi et al., 2015.)

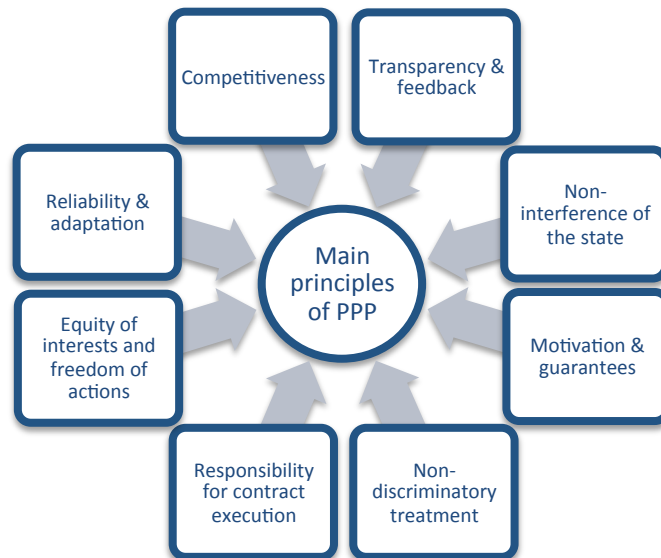


FIGURE 7. Main principles of public-private partnership, Vecchi 2015

### 3.3.1 Equity of interests of the parties and freedom of action selection

This basic principle of the market economy is manifested in the PPP in several aspects. It implies, firstly, the equality of all participants in access to services provided by private companies in the field of public services. Secondly, the equality of all private enterprises in the right to enter into PPP contracts. Thirdly, freedom of the partners to choose the form and methods to achieve goals of the partnership. (Vecchi et al., 2015.)

### 3.3.2 Reliability of the PPP contract and at the same time the possibility of change and adaptation

PPP contract is a complex, comprehensive document designed, as a rule, for a long-term implementation. It spells out the rights and obligations of the parties, the form of state support, and the minimum rate of return of the private partner. These and other similar content of the contract provisions must be stable in its performance over time. However, there is a number of circumstances, which require changes to the contract. For example, the

environment is gradually changing, and, respectively, it may be necessary to make corrections, specifications in the contract in relation to the new conditions. (Vecchi et al., 2015.)

### 3.3.3 Responsibility for the execution of the contract

A private company is a state's partner and must provide services in full compliance with the terms of the contract. The responsibility for the contract's implementation is higher than in agreements between private companies. A private company has no right to suspend its work in PPP projects, as this will affect a broad range of third parties, which are consumers of public goods or services. The private company should solve all the issues and difficulties with the state through dialogue in a proactive manner, anticipating possible risks. (Vecchi et al., 2015.)

### 3.3.4 Competitiveness

This principle appears on the stage of the competition for the signing of the PPP contract with the state. Competition among private companies for participation in the PPP project allows the state to choose an effective partner and reduce the costs for the whole project. (Vecchi et al., 2015.)

### 3.3.5 Transparency and feedback

The civil society, in the interests of which the PPP projects are implemented, should have access to complete information on the state of the enterprise, its financial, economic and other indicators, standards and quality of services. It is necessary to provide consumers with information via communication channels with private companies and with government agencies that control their operation. (Vecchi et al., 2015.)

### 3.3.6 Non-interference of the state in the sphere of responsibility of its private partner

After signing the PPP contract, the government has no right to interfere in the economic and administrative activities of a partnering private company who makes all administrative, management, personnel and other decisions on its own. With the right of ownership, the company owns the right of manufactured products and on earned profit. (Vecchi et al., 2015.)

### 3.3.7 Motivation and guarantees

The government uses an extensive system of motivational incentives to encourage private companies to participate in PPP projects: co-financing, subsidies from the budget, preferential tax treatment, special customs regimes, profitability guarantees, loans, supplies, procurement, reduction (cancellation) of concession fees, rental payments and etc. The public-private partnership guarantees are understood in a broad sense and are not confined to financial ones. (Vecchi et al., 2015.)

### 3.3.8 Reimbursability

Upon termination of the contract on the initiative of the state, the private partner receives compensation on the investment made by the company and is compensated on the lost profit, except for the cases of infringement on its part of the contract conditions. (Vecchi et al., 2015.)

### 3.3.9 The equal (non-discriminatory) treatment to foreign companies

It gives foreign companies equal rights with domestic entrepreneurs. This principle is embodied in the rules to ensure non-discriminatory treatment of foreign companies' access to competitions for PPP projects, currency regulation activity of the state partners and their right of free disposal of the net profit obtained in the object of PPP, including the right to export net profit abroad. (Vecchi et al., 2015.)



### 3.4 History of PPP

Interaction of the state and the private sector to address socially relevant problems has a long history. However, PPP has become more relevant in recent decades. On the one side, the complexity of the socio-economic life makes it difficult for the government to perform socially important functions. On the other side, there is a business interested in new spheres for investment. PPP is an alternative to the privatization of the strategically important objects of state property. (Varnavskiy 2005.)

The early traces of PPP prototypes could be found in the Roman Empire and medieval Europe, but the roots of the public-private partnerships lie in the 19<sup>th</sup> century. This event appeared with the era of industrialization in the United Kingdom and France, with rapid urbanization and increasing expansion of transport network, water and energy supply. This development was largely achieved by private entrepreneurs and extended rapidly to the rest of Europe. (Bezançon 2004.)

The concept of PPP found its gradual revival only in the past decades, as the world met great convulsions in 20<sup>th</sup> century – wars and economic crises hit all countries. The term "public-private partnership" appeared in the early 90s of the 20<sup>th</sup> century and relates mainly to the "British model" of PPP. In 1992, the government of Prime Minister J. Major announced the "Private Finance Initiative» (PFI), which was a modernized concept of management of state property. The essence of the PFI was to transfer finance functions (construction, renovation, operation, management, etc.) Of socio - cultural and industrial infrastructure, owned by the state, to the private sector within the framework of contracts and on public-private partnership agreements (House of Commons Debates, 1992). This radical change in the public administration system in the UK has resulted in a significant transformation in the institutional environment, as well as in the relations between the state apparatus and the private sector (Private Finance Initiative, 2010).

Thus, due to the rapid development of diverse forms of PPPs in all regions of the world and its implementation in various sectors of the economy, this form of cooperation can be regarded as characteristic of the modern mixed economy (Varnavskiy 2010).

Nowadays, billions of dollars are invested worldwide in public-private partnership projects in transport, health, energy, telecommunication sectors (World Bank, 2014) and many other spheres, such as education and science (Gordeev et al., 2008, Hayrapetyan 2008).

### 3.5 International Experience of Interaction

Thus, the starting point has been set - a broad and active use of public-private partnerships in various countries and regions has begun. Identifying the priority sectors of PPP application is important. Investing directly in all sectors of the economy is impossible, and, of course, there are the spheres where it is necessary to invest in first of all. Also, the industries in countries with different levels of economic development that require the attraction of private capital differ significantly. (Mamchenko et al., 2010)

According to the analysis of PPP application in various countries, conducted by local economists, the partnership model has been used successfully in transport (roads, railways, airports, ports) and social infrastructure (health, education, tourism), household utilities (water, electricity, gas) and in other areas (prisons, defence and military). (Hayrapetyan 2008).

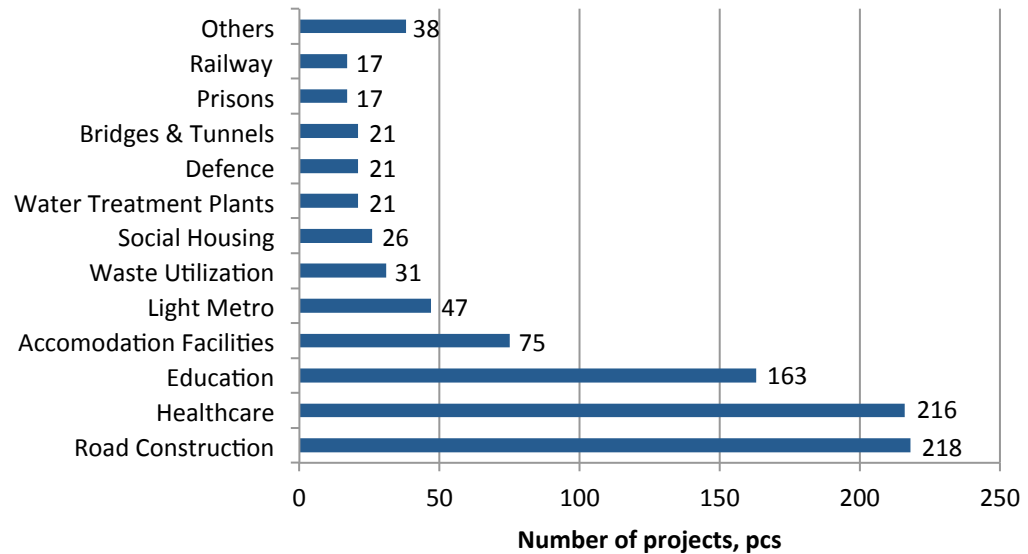


FIGURE 8. Sectors in which PPPs are used in the world (based on the "Foreign experience in the use of public-private partnership", Hayrapetyan 2008)

To analyze the use of PPPs by countries, in the countries of the "Big Seven" (US, UK, Japan, Italy, France, Germany, Canada), in the first place are health projects (185 out of 615 projects), 2nd place is for education (138 projects) and in 3rd place is road construction projects (Appendix 5).

Analysis of the use of PPP projects separately for each country of the "Big Seven" is: US - motorway construction (32 out of 36 projects), the UK motorway construction projects are 123 out of 352 and education projects (113 out of 352 projects), Germany - education (24 out of 56 projects) (Hayrapetyan 2008).

A project for the reconstruction of Germany's largest airport in Frankfurt am Main, effectively combining the interests of public and private partners, is recognized as a successful model of PPP. The project was intended to be a semi-privatization as a type of concession. One third (29%) of issued shares were sold on the stock exchange. The holders of the remaining shares were the land Hessen (32.1%), city of Frankfurt (20.5%) and the State (18.4%). So, the joint stock company "Fraport" was founded and deliberately retained the control of public investors. This company is a

"private" shareholder of other German airports, that is, the "private" party of partnerships is represented by the structure with predominant state participation. (Hoepfner et al., 2003.)

Considering other developed countries (Austria, Belgium, Denmark, Australia, Israel, Ireland, Finland, Spain, Portugal, Greece, South Korea, Singapore), the picture is as follows: in the first place in favor of PPP used in highway construction and their reconstruction (93 projects), health care (29 projects), education (23 projects) (Appendix 6).

In developing countries and countries with transitional economies, the industries mentioned above (except motorways) are not the prime ones. As a result of lower levels of socio-economic development in these countries the transport infrastructure (construction, reconstruction of railways, airports, ports) is in 1st place. (Hayrapetyan 2008).

In countries with transitional economies - namely, the countries of Central and Eastern Europe (Bulgaria, Czech Republic, Hungary, Croatia, Poland, Romania); Baltic countries (Latvia); CIS countries (Ukraine) on the use of PPP models are leading in roads, bridges, and tunnels construction, rail, airports construction. These spheres are paid special attention and have been invested in the first place (Appendix 8).

Developing countries (22 out of 95 projects) - India, Brazil, Chile, Hong Kong, Mexico, Saudi Arabia, United Arab Emirates - allocate priority to roads; second place is occupied by airports, prisons, and water treatment plants projects (Appendix 7).

What has caused such a difference in the use of partnerships in different countries is, first of all, a difference in economic development. Secondly, government policy influences the development of certain structures - (where there is a stable market economy, a high rate of GDP); the state ensures a high level of social protection, where the average life expectancy is high, and there is a high quality of health care and education. Another factor is the interest of the countries in the development of these sectors, as the partnership allows attracting private

sector investment, allocating risks between the partners in the ongoing projects. (Hayrapetyan 2008).

Thus, on the basis of the above, the following can be concluded:

1. There is a significant difference between the level of socio - economic development and priority sectors for use in their PPP - projects;
2. In any country, government selects the most priority sector for the implementation of PPP projects (depending on the degree of importance and feasibility);
3. The more successful interaction of interests of the state structures and private representatives is possible with the completeness of the clarity and predictability of the future development strategy of the country;
4. In each country, the specialized agencies responsible for the implementation of certain activities on a national scale are set up;
5. Broad and structured regulatory framework governing contractual relations in the various sectors allows to take into account the variety of conditions of different areas more fully.

### 3.6 Reasons for Implementing PPP Projects

Each participant of the project contributes to the overall development of the project. For example, the business provides financial resources, professional experience, flexibility, fast adaptation and efficiency in decision-making, shows the efficient management and ability to innovate. At the same time, the so-called "know-hows" are introduced in the technologies and methods of administration in the implementation of projects, and relationships are developed with suppliers and contractors, what increases the demand for highly skilled workers in the labour market. (Vecchi et al., 2015.)

The state provides the powers of ownership, offers all kinds of benefits and guarantees, as well as financial resources. When the PPP projects

are implemented, the government develops its main functions - control, regulation, and compliance with the public interests. (Varnavskiy 2010.)

The business's interest is in maximizing profits from the sale of projects since enjoying economic freedom in the projects, provided by the state, the private sector tends to increase productivity and innovation. Secondly, the business, in case of the unfortunate circumstances, when employing the project, receives sufficient guarantees, such as refund of investment in the project, because the state bears certain risks (according to the agreement of the parties). Finally, the private sector receives a long-term management of state assets on favourable terms of payment. (HSE 2010.)

The interest of the state is that it can shift part of the costs for maintenance and investment property to the private sector. Also, with the lease and concession payments, government agencies receive an additional source of income in the budget. (Varnavskiy 2010.)

After all, the state's actions should be aimed primarily at improving human well-being. Among the positive aspects of the partnership, there is an improvement in the quality of goods and services, and secondly, solution of social - economic problems. And, thus, the government can spend saved funds on the solution of other more important tasks and perform their primary functions (Mamchenko et al., 2010).

### 3.7 PPP Risks

One of the main objectives of the PPP project participants is to classify, evaluate and distribute the risks that each of them can eliminate (Crampes et al., 1998). For a modern partnership, a wide, multidisciplinary risk sharing between the government and private companies involved in the project is distinctive. Risk management is carried out throughout the whole project life cycle and is intended to solve problems of identification and maintenance of the risks, prevent their occurrence, as well as mitigate them in the interests of the project.

The problem of the risk distribution in the PPP projects is the complex and most negotiated issue due to the ambiguity of the matter. In the world practice, a lot of projects have been discontinued (Harris 2005) or not even started due to excessive risks or poor risk evaluation (Marques et al., 2009). Risk sharing between parties of the PPP project is both a decision on the obligations of the parties, and a financial decision as well. For almost all cases, this matter is negotiable process. Risk management goes through five stages (Tikhomirov et al. 2003, Kloosterman 2014), which are demonstrated in the figure below.



FIGURE 9. Five Stages of Risk Management (based on Kloosterman 2014)

There are four main categories of risks in the implementation of PPP projects: political, technical, commercial, and economic (Varnavskiy 2009). Political risks are linked to the government's actions, reflected in the ability of private companies to serve customers and to earn income. They may include measures that suspend or terminate the contract anticipatorily, leading to the imposition of fines or enacting regulations that reduce revenues. As a rule, the government, and it is stipulated by law, must

provide compensation for political risks (for example, to completely cover the risks of confiscation of the property of the concessionaire). Among the most serious risks are the risks of changes in the rules governing the activities of private companies. The state significantly affects the activity of private operators in the state property. It sets the tariffs, develops competition rules and work standards for the operators. Changing these rules and regulations, being in force at the time of signing the contract, is a significant risk to the private entrepreneur. (Grimsey et al., 2002.)

Technical risks are associated with the construction and operation of the facility. Most of these risks are borne by the state's project partner, designers, construction companies and operating companies. Some of the risks are borne by the state. At the preliminary stage of preparation of the PPP project (development of the project details, business plan, design, documentation, etc.) the risks between the state and its potential partners are distributed clearly. If faults and failures in the project specifications occur in the governmental or departmental documentation proposed to the private business, it is clear that all the risks and responsibility are borne by the state. If errors or omissions are contained in the documents and proposals of the private partner, it is the private company's responsibility. The construction period of the PPP projects, particularly in transport and energy infrastructure projects is long enough. Since the signing of the contract and up to the moment when the private partner will receive the first revenues, years pass. That could lead to a significant increase in construction costs. Rise in the costs of construction is one of the main risks of this stage of the project. In the PPP contracts this risk is divided between the state and a private company. Construction problems caused by technical reasons are solved by the private sector and relevant subcontractors. In addition, the private company is responsible for the risks of environmental damage. During the construction period, the natural disasters or adverse natural phenomena cannot be excluded. The responsibility for such risks is borne by the private sector, and some of such cases can be compensated by the insurance companies. The risks associated with the delays in the allocation of land plots for the



construction site is borne by the government. (Grimsey et al., 2002, Varnavskiy 2009.)

Commercial use of the PPP object after the completion of its construction and commissioning gives a rise to a number of risks. One of the most important factors in the implementation of such infrastructure projects is the possible lack of demand for produced services in the expected amounts. Commercial risks are normally borne by the private company. However, experience shows that the scale of these risks may be too large to be compensated by the private sector only. Sometimes, these risks are borne by the state jointly and severally with the private partner. (Marques et al., 2010.)

The economic risks are caused by the lack of confidence in economic growth, inflation and other general economic circumstances. These risks are compensated partially by the state via guarantees and benefits, and partially by private companies, operators and insurance agencies. The impact of currency fluctuations on the profitability of the business is the main element of currency risk. Financial risks are risks whereby the actual cash flow will not be sufficient to repay the debt and the interest, as well as obligations to shareholders. In the PPP contracts, these risks are distributed at various stages of the project among the project operator, investors, banks, insurance companies, and sometimes partially shared with the government. (Varnavskiy 2009.)

### 3.8 Types of PPP

Internationally there are a number of basic types of agreements recognized which are implemented on the basis of the PPP model. (UN, 2008.) Below in Figure 10 is presented a detailed description of most commonly used PPP types in world practice, as well as demonstrating the interdependence of private sector risks and degree of its involvement to a project.

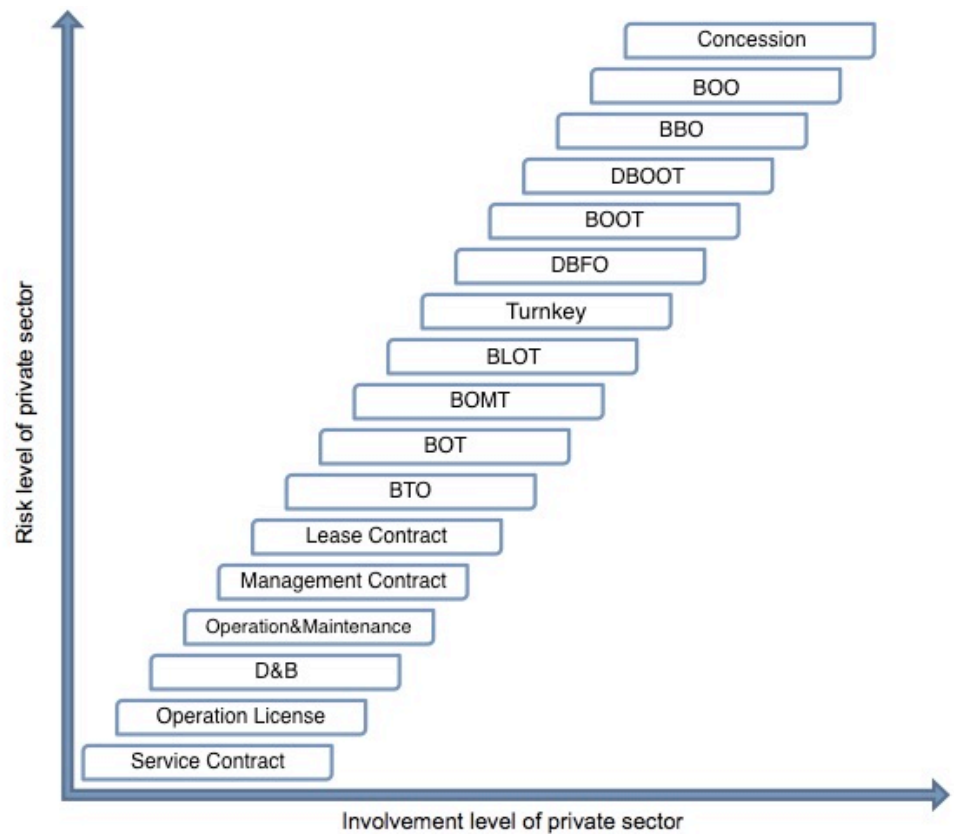


FIGURE 10. Types of PPP: Direct correlation between risk distribution level and the degree of the private sector involvement (based on UN 2008)

Concession, the concessional agreement- a form of PPP, the involvement of the private sector in the effective management of the state property or in the provision of services, usually provided by the state, with transferring the set of exclusive rights to a certain facility on mutually beneficial conditions;

DB (Design - Build) - "design – construction" - the private sector designs and builds facilities on the basis of the construction contract for immediate operation of infrastructure to meet public sector requests for services. Some researchers are not inclined to consider the DB model as a PPP form and call such relations contracts for the execution of the state order);

OM (the contract for the operation and maintenance) - a private enterprise in accordance with the terms of the contract maintains the property belonging to the state for a certain period. The ownership of the property remains within the public entity. Some researchers consider this model as a version of service contract;

BOT (Build - Operate - Transfer) - "construction - operation - transfer" - is the classic version of the concession model. The concessionaire is to construct and operate the facility within a specified period, after which the facility is transferred to the state management;

BOO (Build - Own - Operate) - "building - ownership - management" - the concessionaire builds the facility and performs subsequent operations, managing the object on the right of ownership, the validity of which is not restricted;

BTO (Build - Transfer - Operate) - "building - transmission - control" – is a classic concession. The concessionaire is to build the facility that is transferred to the state ownership immediately after the completion of the construction works, after which it is operated by the concessionaire during the period, stated in the contract;

BBO (Buy - Build - Operate) - "purchase - construction - management" - a form of sale, which includes the restoration or modernization of an existing facility. State sells the object to the private company, which, in its turn, makes the necessary improvements for the effective management;

BOOT (Build - Own - Operate - Transfer) - "building - ownership - management - transfer" – the right of possession and maintenance of the constructed facility belongs to the private business and is carried out within a specified period, after which the object becomes the property of the state;

BOMT (Build, Operate, Maintain, Transfer) – "construction - operation/management - maintenance – transmission" - the emphasis is on the responsibility of the private partner for the maintenance and management of the facilities constructed, the right of ownership belongs to the private business;

BLOT (Build, Lease, Operate, Transfer) - "construction - rental - operation – transfer" - the company of the private sector receives a franchise to finance, design, construct and operate the leased facility during the rental

period, paying rental fee;

DBOOT (Design, Build, Own, Operate, Transfer) – “design - construction - possession - operation/management – transfer” - the distinguishing feature of this type of agreement is the responsibility of the private partner not only for the construction of infrastructure facility and its maintenance but also for its design;

DBFO (Design, Build, Finance, Operate) – “design - construction - financing - operation/management” - in addition to the responsibility of the private partner to design the facility, it also burdens the responsibility for funding the construction and management.

There are also simpler forms of PPP, close by their nature to the concession:

Lease contract - the contract, similar in content to the rental contract. The tenant does not participate in construction, receiving an object from the state. Obligations of the Lessee are maintenance, charging and payments to the state for use of the object;

Service contract – the government signs a contract with the private sector, employing it to maintain the facility;

Management contract - the government signs a contract with the private sector, employing it to manage the facility;

Turnkey - the state finances, the private sector designs, builds and manages a facility.

Operation Licence (the right to operate) - a private operator receives the right (license) for the production and provision of public services, usually for a specified period. This model is often used in IT projects.

#### 4 PPP IN RUSSIA

After various options of interaction between private businesses and government, on a global scale, were described, the development and the success of the relationship between the state and private sectors in Russia are considered in this chapter.

The formation of public-private partnership mechanisms in Russia is due to the following reasons (Savchenko 2014):

- 1) Attraction of extra funding for the development of the economy sectors, important to the state, in which private business participation is minimal or absent (infrastructure industries, such as transportation, roads, etc.; innovative industries; ventures with high social and strategic importance);
- 2) Availability of alternatives to the privatization of state property in unattractive from an economic point of view areas;
- 3) Development of the distant regions, which are exposed to a prolonged economic stagnation without the private capital inflows, as far as the state has a low capability to participate equally in the development of all aspects of regional infrastructure due to the significant territory of the country.

The introduction of public-private partnership in Russia is facing some legal issues (lack of the necessary regulatory framework of functioning PPP), economic issues (lack of development of market relations) and management challenges (most officials lack professional legal training for the development of the relevant contracts in this area). The development of forms, models, mechanisms and institutions of the PPP and the practical organization of the work requires the formation of an ad hoc legal framework (Savenkova 2010).

In Russia, legislative definition of public-private partnerships appeared in 2005 in the sections of the Federal Law and the Civil Code, defining the types of property, as well as in the provisions of the Russian Federation on the recognition and protection of the form of ownership of the Constitution (Federal Law No 115-FZ "On Concession Agreements" of 21 July 2005).

However, in 2006, in Russia, the first regional laws dedicated to PPP were framed. Thus, the Legislative Assembly of St. Petersburg adopted the Law "On participation of St. Petersburg in public-private partnerships." In the Republic of Kalmykia from 1 January 2009 the Law "On Public-Private Partnership in the Republic of Kalmykia" entered into force. In the Republic of Dagestan Act of 1 February 2008 № 5 "On the participation of the Republic of Dagestan in the public-private partnerships" is in force. In some other Russian regions (Samara, Chelyabinsk region, and others.) such regulations are in active preparation. Thus, for the Russian Federation, the issue of PPP legal provision remains open. (Khodos et al., 2012.)

#### 4.1 The Mechanism of State Administration in Russia

The formation of the PPP management system in modern Russia began in 2004. In June 2004, the Chairman of the Russian Government has created the Council on Competitiveness. One of its tasks was "to ensure interaction of executive authorities and the business community" (RF Government Resolution № 263, 2004). The Council includes 45 people: Federal Government ministers, heads of the Bank of Russia, businessmen. In October 2004, this Council, together with the Russian Government addressed the issues of public-private partnership in the transport sector for the first time. (PPP in Russia, 2013.)

In accordance with the decisions made, the PPP advisory bodies began to appear in ministries and departments. Expert councils on public-private partnerships have been established within the ministries of transport, economic development, regional development, culture and mass media, as well as the Marine Board. These councils, for instance, consider the projects, applying for the assistance of the Investment Fund of the Russian Federation. According to currently accepted procedure, the PPP projects, that met the established criteria and received positive decisions from the ministries and departments, are considered by the Investment Commission. This Commission generates a list of selected projects of

national importance, and transmits them to the Ministry of Regional Development of the Russian Federation for the organization of consideration of the Governmental Commission. The Governmental Commission on investment projects of national importance is a coordinating body formed in order to create a list of investment projects that are granted with the State support from the funds of the Investment Fund. An organizational and technical support of the Commission's activities is carried by the Ministry of Regional Development of the Russian Federation. (RF Government Resolution № 695, 2005.) Projects approved by the Governmental Commission, are included in the list of investment projects, which will receive budgetary funds. After the conclusion of an investment agreement and an agreement on the provision of state guarantees of the Russian Federation or the concession agreement, the project is considered as approved and shall be registered in the State Register of projects. (PPP in Russia, 2013.)

#### 4.2 The Practice of Implementation of PPP in Russia

In the life of the Russian economy, the very possibility of partnerships between government and businesses before the beginning of the century seemed unlikely. In Soviet times, the government, under the leadership of the party, played the role of a strict but prudent guardian who managed the acceleration of growth, restructuring the economy and so on. With the development of the liberal reforms there has been an opposite trend - the liberation of the economy from direct government intervention, which dominated the economic strategy, due to the weakness of economic regulation mechanisms in a recession in the second half of the 90s. (Orlov 2008.) Thus, the mutually beneficial partnership between government and business was recognized as an essential element of public policy only in the early 2000s. The economic life of the country has faced a necessity of vital transition from an economy based on the exploitation of raw materials industries, to the economy of knowledge and the development of high technologies. As a result, the issues related to creation of clear legislative support of the development of partnerships and the definition of the

concept of public-private partnership became of a paramount importance. (Khodos et al., 2012.)

In Russia, the most widely used form of public-private partnerships is the form of a concession at the moment, an agreement under which one party (the concessionaire) undertakes the responsibility to create or reconstruct a certain object, the ownership of which remains with the second party of the contract – the state. The state in its turn transfers the right of ownership and use of the object for a long period of time to the concessionaire. The “Life Cycle Contracts” (LCC) are often considered as a public-private partnership in the Russian practice. LCC is a special long-term contract, in which the private party provides the whole range of activities from design and construction of the object to operation and recycling. Another common form of public-private partnerships are the specialized enterprises or public-private owned enterprises (SPV - special purpose vehicle), the authorized capital of which is formed with both private and public partners and is aimed to address socially important problems on mutually beneficial conditions. (PPP in Russia, 2013.)

Distribution of possible forms of interaction between business and government by term of implementation and the degree of involvement of business (risks) is shown on Figure 11.



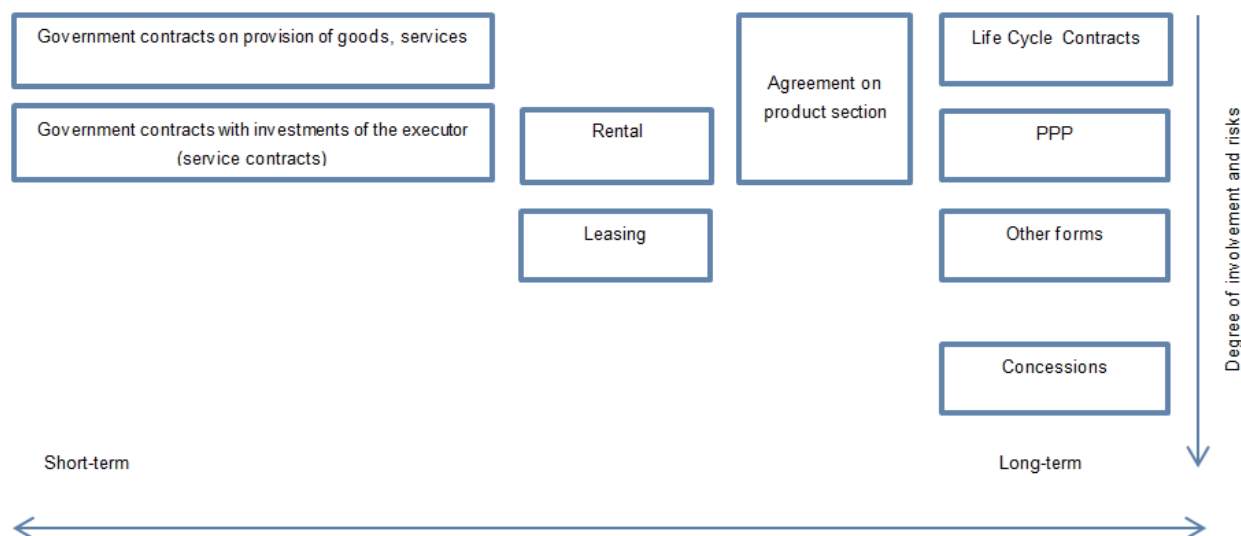


FIGURE 11. Dependence of level of risks from duration of interaction of private businesses and government (PPP in Russia, 2013)

Specific examples in the field of interaction between government and business, of course, are the so-called special economic zones, where there are currently eleven of them (Federal Law No 116-FZ "On Special Economic Zones in the Russian Federation" of 22 July 2005). And the first one was organized in the Republic of Tatarstan, in December 2005. Its formation and development is quite dynamic: in the area of 20 square kilometers the construction of the first complex infrastructure, including an administrative and business center, customs terminal, roads and utility networks, is completed (RF Government Resolution No 784, 2005).

Positive experience in the development of public-private partnership has been accumulated in St. Petersburg. On December 20, 2006 the city Legislative Assembly adopted the Law "On participation of St. Petersburg in public-private partnerships". Its targets are implementation of social projects in the city, attraction of private sector investment in the economy of St. Petersburg, ensuring efficient use of property in ownership of St. Petersburg, and improving the quality of services and works provided by customers. (Resolution on participation of St. Petersburg in public-private partnerships, December 20, 2006.)

This law establishes the procedure and rules for the transfer of state property of St. Petersburg or the rights to carry out various activities to the private sector. The law makes it clear to the investors in which projects, and under what conditions, the city is ready to enter into a relationship of public-private partnership. There are no such laws in any other region of the Russian Federation.

The main achievements in the area of PPP development in Russia are the political support for the development of infrastructure in terms of PPP and launching a wide range of projects. Also, the development of the legal and institutional framework for PPPs at the federal and regional levels is carried out. Another big thing is the growing interest of foreign investors in the implementation of the Russian projects in a number of industries. (PPP Development Center 2016.)

But on a par with the success and impressive results there are some problems and gaps in the implementation of projects (Deryabina 2011). There is no consistency of government action in the development and implementation of projects. Each ministry is trying to lobby their projects and create their own programs for project implementations. Moreover, the big minus is that Russian legislation does not contain special provisions specifically regulating particular aspects of the implementation of PPP projects. It is not enshrined in law, even the very definition of a public-private partnership that could be done in the framework of a federal law or regulation of the PPP. Also, the projects and procedures for protecting the interests of individual investors are not regulated as well. Russian projects often lack financial resources and inefficiently use available resources. (Khodos et al., 2012.)

Analyzing the development of partnerships in foreign countries, there is a particular emphasis on the fact that these countries are ready for new changes and a development of special economic relationships, The representatives of private businesses and the government have a clear position towards relations with the private sector. The government has a sufficient number of the projects involving development of strategically

important objects, depending on the level of development of the country and its economic situation. The specialized agencies responsible for the implementation of certain activities on a national level are highly developed. All this speaks in favor of the more successful development of public-private projects and their significant impact on the economies of countries, compared to the situation in the Russian Federation. (Varnavskiy 2005.)

Summarizing the analysis of the development of PPPs in a number of foreign countries, and correlating with the Russian analogy, it can be concluded that the development of public-private partnership in Russia is possible and is particularly necessary because the country is in a difficult stage of economic development, both due to the consequences of the financial crisis of the years 2007-2009 and the economical embargo and conditions of sanctions. The PPP projects should be proceeded circumspectly in terms of choosing partners both on Russian and foreign markets, but cooperation of businesses and the states is possible. The main issue to be taken into consideration – the projects should be “properly structured and clear for implementation”. (Erofeev et al., 2014.)

Perspectives for the transition to a higher level of development of the PPP market depends on internal and external economic, institutional and political factors. Despite the fast development of global financial markets and a significant deterioration in the economic situation in Russia, institutional investors are willing to invest in projects with low risk and moderate requirements for the initial investment amount. The development of public-private projects in the field of transport infrastructure, housing and communal services, energy, as well as industry and construction is particularly successful. This implies significant changes in respect of private operators, the transition to the possibility of a rational combination of free competition with measures of state regulation and the interests of society.

## 5 CASE COMPANY

Effective interaction between public and private institutions in the energy sector is one of the main objectives of the liberalization of the industry. This interaction would enhance public sector efficiency and reduce the costs of infrastructure projects implementation. The development of PPPs can create a competitive energy market, which, in turn, would motivate investors to participate in the renovation and construction projects of new facilities in the industry. PPP contracts in this area can be described as the most complex in this model of relations. This complexity appears not only because of the high specificity of the energy sector, but also due to the international nature of most contracts. (Belitskaya 2011) The PPP contracts in the energy sphere require a very high level of trust between the public and private institutions because the energy sector is a strategic sector for all governments in the world and relies on long-term relations between parties. For instance, a partnership in the sphere of NPP (Nuclear Power Plant) construction is meant to be on a one hundred year period – construction of the plant, its launching, operating, and, finally, decommissioning. In addition, the investments in each project are very high, and the risks are very high too (Interviewee 4, 2016).

Below are listed the factors affecting the development of the nuclear industry (Rosatom, 2014):

- An increase in global population from seven to nine billion people in the next 50 years;
- Growth in electricity demand will double by year 2050 as a result of meeting the electricity needs of the growing population (in the next 50 years, humanity will consume more energy than was spent in the entire previous history);
- An increase in the accumulation of greenhouse gasses. The global level of carbon dioxide emission is 25 billion tons per year, or 800 tons per second and this number continues to grow. It is predicted that during the

XXI century, the concentration of greenhouse gasses in the atmosphere will increase by more than two times compared to pre-industrial levels.

### 5.1 Company Profile

A key advantage of Russia's nuclear industry is that it is one of the most advanced in the world in terms of scientific and technical developments in the design of reactors, conversion stages of the nuclear fuel cycle (NFC), the experience of operating nuclear power plants, and qualification of plant personnel (Interviewee 2, 2016). Russia's enrichment technologies are the most advanced in the world, and the projects of nuclear power plants with pressurized water reactors (VVER) (see Appendix 9) have proven their reliability in the process of one thousand reactor years of trouble-free operation. The high quality of products and services offered is confirmed by successes in international tenders for the supply of nuclear fuel and construction of nuclear power plants abroad. (Rosatom, 2014.)

Nuclear generation has a special place among the generation of technologies, minimally influencing the environment: annually world nuclear power plants prevent the emission into the atmosphere of more than three billion tons of carbon dioxide. NPPs almost do not produce greenhouse gas emissions. "Rosatom" Corporation is one of the largest Corporations in Russia and one of the leading companies in the global nuclear technology market. The Corporation is a strong supporter of the global reduction of greenhouse gas emissions program and the transition to an economy based on renewable energy sources. (Rosatom 2014.)

State Atomic Energy Corporation "Rosatom" was established on December 18, 2007 (Rosatom, 2014). The status, purpose of creation and its operations, functions and powers of the State Corporation "Rosatom" are defined in the Federal Law of December 01, 2007 No. 317-FZ "On the State Atomic Energy Corporation "Rosatom". There are approximately 350 organizations and enterprises, which constitute the Corporation. In total, it employs 258,000 people. The CEO of the State Corporation "Rosatom" is Sergey Kiriyyenko.

As part of its Social Corporate Responsibility program, the Corporation spent 33.2 billion roubles on environmental protection (2014) and spends 1 million euros per day on research and development. The Corporation is the No.1 company in the number of simultaneously constructed nuclear power plants abroad (29 blocks are already in the portfolio, 11 blocks are in the construction phase). (Rosatom 2014.)

State Atomic Energy Corporation "Rosatom" brings together approximately 400 companies and research organizations, including all civil nuclear companies in Russia, nuclear weapons complex enterprises, research organizations and the only nuclear icebreaker fleet in the world. State Corporation "Rosatom" is the largest generating company in Russia, which provides 33% of electricity in the European part of the country. Rosatom holds a leading position in the world market of nuclear technologies, taking 1<sup>st</sup> place in the world by the number of simultaneously constructed nuclear power plants abroad; 2<sup>nd</sup> place in the world in uranium reserves and 3<sup>rd</sup> place by volumes of its production; the Corporation is 2<sup>nd</sup> in the world for the generation of nuclear electricity, providing 36% of the world market for uranium enrichment services and 17% of the nuclear fuel market. (Rosatom, 2014.)

State Corporation ensures the implementation of state policy and the unity of management in the use of nuclear energy, the stable operation of nuclear power and nuclear weapon complexes, nuclear and radiation safety. It is charged with the task of implementation of Russia's international responsibilities on the peaceful use of nuclear energy and non-proliferation of nuclear materials. The creation of the State Corporation "Rosatom" is intended to facilitate the implementation of the federal target program for the development of the nuclear industry, to provide new conditions for its development, and to strengthen existing competitive advantages of Russia in the world market of nuclear technologies. (Interviewee 1, 2016, Rosatom, 2014.)

As a conductor of Russia's policy in the field of nuclear energy, state Corporation "Rosatom" ensures that Russian international obligations in

the nuclear field are accomplished. Rosatom is the executive body of the Russian Federation on the peaceful use of nuclear energy cooperation in the implementation of interstate and intergovernmental agreements. Particular attention is paid to cooperation for the promotion and strengthening of the international regime of non-proliferation of nuclear weapon. (Venediktov 2015.) The Corporation is engaged in constructive cooperation with international organizations - International Atomic Energy Agency (IAEA), the Atomic Energy Agency of the Organization for Economic Cooperation and Development (OECD), the World Nuclear Association (WNA), the World Association of operators of nuclear power plants (WANO) and others. Also, the President's offered initiative of January 2006 to establish a global nuclear power infrastructure is implemented to ensure equal access to the nuclear energy of all interested parties. As part of this initiative's implementation, the International Uranium Enrichment Center (IUEC) was established in Angarsk. (Interviewee 4 2016, IUEC 2016.)

The development of nuclear energy is based on the long-term technology policy, along with the development of nuclear power and the development of next-generation technologies.

Given the limited nature of total investment resources, and taking into account the current and projected world market conjuncture, existing competitive advantages, and technological backlogs of nuclear power complex, the business strategy of ROSATOM suggests a concentration on improving the efficiency of the nuclear power business, which should lead to a significant increase in key financial indicators by 2030.

Achieving global technological leadership in the nuclear industry is the target reference point strategy of the State Corporation "Rosatom". In the long-term plan it aims to significantly scale up international business activities, which is reflected in the targets of the Corporation and its subsidiary organizations by year 2030.

At the end of the year, the foreign revenue of the State Corporation "Rosatom" made \$ 5.2 billion, which is 5% higher than the exponent of 2013.

Over the past four years, the foreign revenue tended to grow moderately. The fastest growing segment of revenue was the nuclear power plants construction abroad: in 2011, the share of this segment in the total foreign revenue rose from 6 to 18% (Rosatom Annual Report 2014). Such growth rates are associated with the transition to the stage of implementation of a number of NPP construction projects abroad, including "Ostrovets NPP in Belarus, "Akkuyu" NPP in Turkey, "Hanhikivi" NPP in Finland.

TABLE 2. The dynamics of overseas revenue, million US dollars (Rosatom Annual Report 2014)

	2014	2013	2012
<b>Overseas revenue including:</b>	<b>5202</b>	<b>4973</b>	<b>4584</b>
<b>Construction of NPPs abroad</b>	948	708	332
<b>Uranium production</b>	2227	2069	2240
<b>Fuel assemblies and other activities</b>	2027	2196	2012

During the year, the Corporation continued its active efforts in increasing of the foreign portfolio for a ten-year period. On 31.12.2014, it amounted to US \$ 101.4 billion, which is 39% higher than in 2013. Compared to the year 2011, foreign orders portfolio had doubled, mainly due to new contracts and agreements for the construction of nuclear power plants abroad (NPP "Hanhikivi" in Finland, "Paks» NPP, power units No 5, 6 in Hungary, "Kudankulam" NPP, power units No 3, 4 in India, "Bushehr" NPP power units No 2, 3 in Iran). (Rosatom Annual Report 2014.)



TABLE 3. Dynamics of the portfolio of overseas orders (Rosatom Annual Report 2014)

	2014	2013	2012
<b>The portfolio of overseas orders in the 10-year period including:</b>	101.4	72.7	66.5
<b>Construction of NPPs abroad</b>	66.0	34.5	28.9
<b>Uranium production</b>	21.8	24.2	24.7
<b>Fuel assemblies and other activities</b>	13.6	15.0	12.9
<b>Project portfolio of the construction of NPPs abroad, the number of power units</b>	29	19	19

The growing number of foreign orders Corporation is an evidence of confidence of foreign partners in Russian technologies. Russian NPP construction projects are of the latest (III +) generation and equipped with both active and passive safety systems. Power units under construction have a double protective shell of the reactor, a passive heat removal system, hydrogen recombiners, the device core localization, and other systems that provide defense inside the NPP. They fully meet all the safety requirements. (Interviewee 5, 2016.)

In general, there are about 30 NPP units at different stages of the negotiation process abroad, which can enhance the portfolio ROSATOM in the coming years (Rosatom Annual Report 2014). Success in foreign markets confirms the high competitiveness of Russian nuclear technology: the portfolio of foreign orders Rosatom on the results of 2014 exceeded 100 billion dollars. (Interviewee 1, 2016.)

## 5.2 Integrated Offer

A key competitive advantage of the State Corporation "Rosatom" on the world market of nuclear energy is an "integrated offer" for the provision of

construction services, operation and maintenance of nuclear power plants abroad. As a responsible supplier of nuclear technology, Rosatom provides a comprehensive solution for the implementation of NPP construction projects, and actively promotes the development of nuclear energy in the countries-newcomers. The complete solution includes assistance in the preparation of qualified personnel, project financing and so forth. (Interviewee 1, 2016.)

The basic condition for an integrated offer of the Corporation is the security that is fully consistent with the latest standards and safety requirements, designed to exclude the possibility of the recurrence of accidents, similar to the NPP "Fukushima" catastrophe (Venediktov 2015).

Cooperation on the construction of nuclear power plants in the country of the customer is possible with the PPP "turnkey" model, or with the classical model of public-private partnership - BOO (build-own-operate). This model of cooperation involves the establishment of medium- and long-term interaction between government and Corporation to implement projects. Currently, this model is actively lobbied by the Corporation and is introduced in the latest projects in Turkey and in Finland. (Rosatom Annual Report 2014.)

The mission of the Integrated Offer is to promote value of nuclear energy for region's social and economic development. Its main objective is to establish clear understandable interaction with positive experience from local community and mass media. (Rosatom, 2014.)

In order to promote Russian nuclear technologies on the world market, the company "Rosatom Overseas" was founded in 2011 by the State Corporation "Rosatom". It acts as an integrator of complex solutions of Rosatom in the nuclear energy sector, regulates the promotion of the "integrated offer" and development of Russia's nuclear business abroad. In addition, the company acts as the developer of foreign projects of the State Corporation "Rosatom", implemented under the BOO scheme. To strengthen the presence in specific markets, the company "Rosatom -

International Network" was established (more details in the next sub-chapter). The task of its regional offices includes the organization of offers to the potential customers of the greatest possible range of goods, works and services. (Interviewee 5, 2016.)

### 5.3 Growing International

Due to the emerging situation in the foreign market, the Corporation has established the number of subsidiary companies in some countries of operation to improve financial results and reduce costs for overseas activities. The marketing offices of the State Corporation "Rosatom" have been transformed into a network of regional centres. As for 31 December 2014, six regional centres are opened in Prague, Kiev, Johannesburg, Singapore, Paris, and Astana. Two more offices in Bratislava and Budapest are to open in the nearest future. (Rosatom, 2014.)



FIGURE 12. The network of regional centres of Rosatom (Rosatom 2014)

Also, it was decided to organize the management of the network of foreign regional centres of "Rosatom" Corporation in the form of a non-profit organization, to ensure the development of an international regional network of a nuclear power complex, called "Rosatom - International Network." "Rosatom - International Network" performs functions of

identifying and promoting the development of new business opportunities. Also, it works on Industry-wide marketing support and analysis of market prospects. Moreover, 'Rusatom-International Network" is developing the implementation of an industry-wide PR- and GR-strategies in overseas markets. Finally, one of key responsibilities of this company is a coordination of the activities of the divisions in the implementation of foreign orders portfolio. (Interviewee 2, 2016.)

## 6 EMPIRICAL PART

In this chapter an empirical research process is described in terms of how it was conducted, including data collection methods, interview interpretation, and what could be concluded from the collected data. The findings introduced below are to be applied in the development plan compilation for the case company activities in the next chapter.

### 6.1 Data Acquisition and Interview Interpretation

As was mentioned in Chapter 1, the two most common research methods are quantitative and qualitative methods. With respect to the thesis subject, the qualitative method of data acquisition and interview method in particular was chosen. An interview is a purposeful discussion between two or more people. (Kahn 1957.) The use of interviews in the research can help gather valid and reliable data, relevant to research questions and objectives. (Saunders et al. 2009) There are different levels of formality and question structuring. An interview may be highly formalized and structured, or be informal and unstructured, or may be a mixture of both styles. So, the interviews, according to Saunders (2009), are classically categorized as:

- structured interviews
- semi-structured interviews
- unstructured or in-depth interviews

Structured interviews use standardized questionnaires or identical set of questions that the interviewer should address to the respondent as it is stated in the list. Structured interviews are considered as a method of data quantification and are used in the respective researches. By contrast, semi-structured and in-depth interviews are non-standardized and often used in qualitative researches. In semi-structured interviews, the interviewer has a list of possible key questions that may vary in interviews with different people, depending on the flow of the conversation and the answers received. So, some questions may be eliminated, their order

may change, or extra questions may be required to receive additional information. Lastly, unstructured or in-depth interviews are informal conversations in which the interviewee could freely discuss anything related to the subject area; the interviewer, however, should have a clear idea about what s/he wants to explore and give an understandable explanation of the topic to the interviewee and lead the interview in that direction. (Saunders et al. 2009.)

As this research bears an exploratory nature, it was chosen to conduct semi-structured interviews and one unstructured interview with the case company's representatives: PPP project manager (Interviewee 1), head of the corporate development and international business department (Interviewee 2), international project manager (Interviewee 3), head of the international relations department of Rosatom-Overseas (Interviewee 4), and head specialist on corporate activities (Interviewee 5). As all of the interviews were conducted face-to-face, the answers were documented by taking notes during the interviews and audio recording on the company representatives' permissions. The interviews were transcribed and sent to the respondents for clarification and confirmation of correctness of the collected information. The history of the interviews conducted could be found in the following table (for questions see Appendix 3):

TABLE 4. Information on interviews, conducted for the research

12 February 2016	Head specialist on corporate activities	Unstructured interview – general information about the case company and its activities
16 March 2016	Head of the corporate development and international business department	Semi-structured interview – international projects and case company's position on the world market
17 March 2016	Head of the international relations department of	Semi-structured interview – Rosatom activity on NPP projects,

	Rusatom-Overseas	the mechanism clarification
18 March 2016	PPP project manager	Semi-structured interview – how the PPP are run in the case company, reasons for PPP model application
18 March 2016	International project manager	Semi-structured interview – activities abroad (obstacles, reasoning and methods of improvement)

The information gathered from the interviews is used throughout the thesis, and its major outcomes are used as the basis of the analyses of the corporation's activities. This information will further help in composition of the development plan of Rosatom PPP project management as well.

## 6.2 Interview Results and Case Analysis

After obtaining all the necessary data and information from the interviews, it is essential to interpret the results and to draw insightful findings from them in the forms of demonstrative analyses. In this part of Chapter 5, the acquired information will be studied and the conclusions based on the author's understanding and observation will be made.

### 6.2.1 VMOST Analysis of the Company

After the information on activities of the case company has been presented, the VMOST analysis will be implemented to determine its organizational strengths and weaknesses at the corporate level. As the annual public report states, the mission of Rosatom is "to promote the competitiveness of the Russian Federation" (Rosatom Annual Report, 2014). The Corporation has a set of values which is employed both among the top management and employees.



FIGURE 13. Values of Rosatom, Annual Report, 2014

#### ONE TEAM

All employees have common goals. Working in a team of like-minded people allows reaching exceptional results. As a team, the organization can achieve most ambitious goals and have significant success together.

#### EFFICIENCY

The employees always find the best solutions to problems. They aim to be efficient in everything they do – in carrying out the goals the employees use the resources in the most efficient way possible and continually improve the working processes.

#### ONE STEP AHEAD

The corporation strives to be the leader in the global energy market. Rosatom states that it is always one step ahead in technology, knowledge and the professional qualification of its employees. The company aims to continuously self-develop and learn.

#### SAFETY

Safety is the highest priority of the company (Critical Success Factor – CSF). In its operation, the organization primarily provides maximum safety



of people and the environment. There is no word “insignificant” when it comes to safety; everybody in the company knows safety rules and follow them, preventing violations.

## RESPONSIBILITY FOR THE RESULT

Each employee bears personal responsibility for his/ her work outcome to the government, the industry, colleagues, and customers. All employees set for themselves the highest requirements. The successful results are the basis for new achievements and further growth.

## RESPECT

The Corporation treats its customers, partners, and suppliers with respect. They always carefully listen to and hear each other, regardless of their positions and places of work. The history and traditions of the nuclear industry are respected within the Corporation. The achievements of the past inspire employees for growth and development.

## Mission

The mission of the State Corporation "Rosatom is “to promote competitiveness of the Russian Federation”. This means the fulfilment of governmental tasks on defence capabilities development, nuclear and radiation safety, socially acceptable production of nuclear power, and the achievement of a technological leadership on a global scale due to advanced competencies “in the science of the atom and the nucleus” (Rosatom, 2014).

## Strategy

The development strategy of the Corporation is accepted by the supervisory board in 2014 for a period till year 2030. The strategy is consistent with the goals set by the government of the Russian Federation for the civil branch of the nuclear industry. The strategy of Rosatom is to transform into the global leader of the industry by developing the new segments on the basis of the traditional markets. In 2010, a special form of

management activity has been developed within the Corporation - strategic initiative. This is a set of interrelated activities of the project nature, significantly influencing on the change in the market position and competitiveness of the Corporation in general and requiring the interaction of several directions of the business. The main strategy initiatives of the Corporation are global leadership in the back-end of nuclear energy, retaining global leadership in the initial stage of the nuclear fuel cycle, increasing the share of nuclear power in the energy balance of the Russian Federation, and global expansion of the VVER (Water-Water Energetic Reactor) technology platform. (Interviewee 1, 2016.)

### Objectives

To achieve the leadership in the industry, Rosatom has stated the concrete target indicators to be met by year 2030. First of all, the Corporation aims to achieve technological leadership. To meet this objective, the expenses on new developments will consist 4.5% of the total revenue – approximately 3 billion dollars per year. Also, new generation of nuclear reactors will be implanted in the nearest future. The next objective of Rosatom is to grow global – it aims to be in top-3 companies in all segments of nuclear energy industry. The target indicators set by the Corporation to achieve this goal are: the share of foreign operations – 50%, the share of foreign assets – 25%. The brand recognition is aimed to be high as well – the target is to enter the top-100 companies in the world. Finally, the corporate objective of Rosatom is to enlarge the scope of the business to the volumes, comparable with the leaders of the nuclear power industry. For this purpose, company aims to enhance the powers of NPPs by 2.5 times, to increase the total revenue by 5 times, and to enlarge the foreign presence by implanting 30 NPPs worldwide. (Interviewee 5, 2016.)

### Tactics

In order to meet the objectives of the Corporation on the 16 year period (till year 2030), the number of steps would be accomplished. Firstly, electricity

production at nuclear power plants will grow in proportion to the growth of global consumption of the energy. Thus, the Corporation on the places of its presence promises to support the entrusted territory with the required amounts of the energy. Secondly, after the Fukushima catastrophe, the big number of countries still has approved their willingness to develop the nuclear power industry, with the subsequent involvement of Rosatom in construction and management of the plants. Thirdly, the steady growth of the nuclear power industry will be followed with the development of the adjacent segments of the sector. Last but not least, the Corporation will invest on R&D, as one of the most prioritized sectors of its activity. This action will facilitate the growth of the revenue, as well as the Corporation's position among top-20 world most innovative companies. (Interviewee 2, 2016.)

#### 6.2.2 Porter's 5 Forces Analysis

In order to analyse the level of competition within an energy industry and company's business strategy development, the Porter's 5 Forces Analysis framework is implemented. In this sub-chapter, the five forces that determine the competitive intensity and therefore attractiveness of an industry are analysed regarding the case company – "Rosatom". The criteria to be applied for the analysis of the position of the State Atomic Energy Corporation "Rosatom" in the energy industry are discussed below.

First of all, rivalry among existing competitors on the market of NPP construction is rather intense. Russia is on the 4<sup>th</sup> place in the world by the number of nuclear reactors after USA, France, and Japan respectively. Rosatom Corporation itself is the second largest nuclear energy company by the power generation, first in the world in nuclear reactors construction and one of the leaders in uranium mining and reserving (IAEA PRIS 2016). The Corporation competes in the global markets with such holdings as French "EDF" and "Areva", South Korean "KHNP", USA company "Exelon", Japanese "TEPCO" and "Kansai", and Chinese "CNNC" and "CGNPC". The last ones are the companies of the potential growth and

are likely to increase their influence in the market in the nearest decade. (Interviewee 2, 2016.) But the most important factor, due to which the Corporation Rosatom actively expands its portfolio, comparing to rivals, is that it is the only company in the industry, offering the PPP model of the cooperation with foreign states. As it was mentioned in the previous chapter, the BOO model of public-private partnership is actively lobbied within the Corporation and was introduced in the latest projects in contracts on nuclear power plants construction in Turkey and in Finland (Rosatom Annual Report 2014). This scheme of partnership became preferential within countries willing to order the NPP construction from Rosatom, because of the reasonable risk sharing and confidence that the company is “able to execute the project fully and on time” (Asodi 2014). This offer made Rosatom attractive for foreign partners, especially for the countries-newcomers to the nuclear energy sector.



FIGURE 14. Top-7 nuclear generating companies for years 2011 and 2030 (forecast), (IAEA PRIS 2016)

The industry of the nuclear energy is not exposed to the threat of new entrants, as many other infrastructure sectors are. In order to enter this market, a huge investment in the primary establishment is required, due to the complexity of the industry activities. Also, it is a time consuming process, because in order to win the customers on the market, the company should ensure potential customers that it is capable to provide them with safe reliable services. Thus, to start the company in the nuclear

energy sector, it takes a long period of time to gain a foothold and be able to offer secure qualitative service.

Despite radiophobia and environmentalists' protests, the nuclear power is used in a fairly large number of countries, both in developed and developing ones. Currently in the world there are already 440 operating units (Appendix 4). The biggest number of units is operated in the United States (99), France is on the second place (58 units) (European Nuclear Society 2016). Nuclear power plants operate reliably in almost every European country. In Europe, they allow to avoid the emission of approximately 700 million tons of carbon dioxide (CO<sub>2</sub>). In Russia there are 10 nuclear power plants (35 units in total), and they prevent the annual emission into the atmosphere of about 210 million tons of carbon dioxide (European Nuclear Society 2016, IAEA 2016). Thus, as the atomic companies and Rosatom in particular can offer secure and environmentally friendly source of energy, such substitutes as coal and oil, which annually become the reasons of serious ecological impact, are reasonably forecasted to be terminated from usage. Moreover, the scarcity of these resources, as well as the natural gas, should also be taken into consideration. Also, there are HPPs and WPPs, but their launch may not be possible in all countries, and, can cede in power generation. Finally, the payback period of the NPPs is shorter, and in a time this recourse of energy possibly can replace the others. (IAEA 2016.)

Talking about the dependence of the Corporation on suppliers, the construction of the "nuclear isle", i.e. the reactor itself, is performed using the resources of the Corporation. The primary principle of Rosatom is to implement the projects completely and on time stated in the contract. So, as much construction and operation activities as possible are operated by the Company itself on own resource base, and the rest of the processes are ran by the local partners, carefully chosen by the project managers and stated in the intergovernmental agreement. For instance, in future construction of the NPP in Finnish Pyhäjoki, the local companies, such as Fennovoima and RAOS Project Oy will participate in construction and

procurement of the plant, as well as the Russian companies. (Interviewee 4, 2016.)

The power of buyers in the market of nuclear energy, and in relation to the Rosatom Corporation in this particular case, in recent year may be higher than usually. This event has place due to the unstable economic and geopolitical global situation. The decision on entering into a contract with any Russian company, and Rosatom is not an exception, is exposed to the risk of abolishment because of the economic embargo of the whole country (Interviewee 2, 2016). This principle works in both directions, as the political tension with the European Union is not the only event that hinders the development of the interstate relations. For example, after the military operations in the Turkey and Syria region, the incident with Russian downed pilots by Turkish military forces influenced significantly the relations between these two countries. Thus, such situation may be the reason for revocation of the contract on Akkuyu NPP construction in Turkey. Thereby, it can be summarized, that nowadays there are no other reasons for preventing from ordering the Rosatom services, but political considerations. (Interviewee 5, 2016.) Rosatom has recommended itself as a reliable conductor to the nuclear power industry with its “integrated offer” and relatively new for itself BOO model of relations, that will help the host country to lead the project on all stages from construction to decommissioning.

### 6.2.3 SWOT Analysis

In this sub-chapter, the SWOT analysis is intended to present the strong and the weak aspects of PPP model of interstate relations conducted by the State Atomic Company Rosatom on the example of the Hanhikivi NPP construction in Finland.

As it was mentioned in the previous chapter, the BOO model of public-private partnership is actively lobbied within the Corporation and was introduced in the latest projects in contracts on nuclear power plants construction in Turkey and in Finland. (Rosatom Annual Report 2014.) In

June 2015, the Finnish State authorities filed an application for a license for the construction of nuclear power plants. On 5 August 2015, as a result of negotiations between the Finnish industrial investors, the energy company "Fortum" and Rosatom, the formation of the project's share capital has been completed in accordance with the requirements of the Government of Finland. The preparatory period works has started on the site in January 2016. The project will be implemented on BOO model, including engineering of the NPP, its construction, and further procurement and operation.

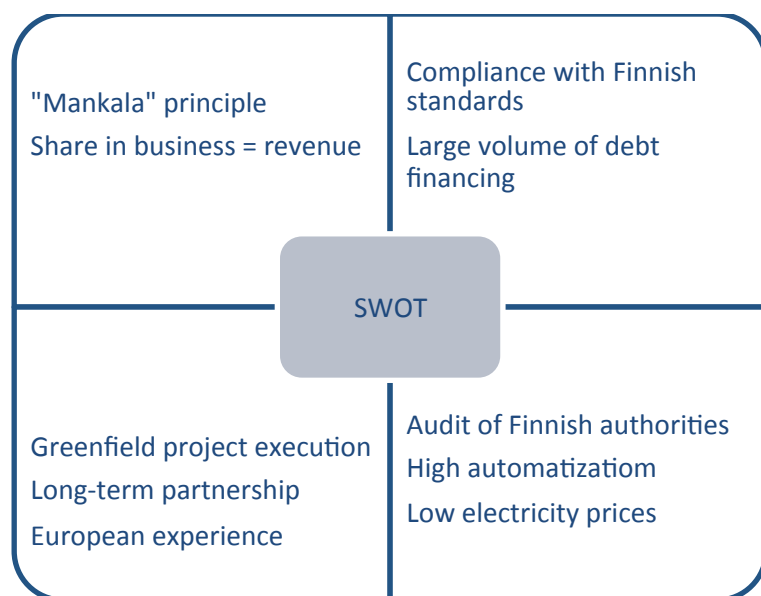


FIGURE 15. SWOT analysis of PPP in Hanhikivi, (based on Humphrey Model, 2005)

### Strengths

In this part of the SWOT analysis, the advantages of the PPP model of relations will be displayed. First of all, it was negotiated, that the project "Hanhikivi" will be run on "mankala" principle: with the first day of NPP commissioning, the host company "Fennovoima" sells produced electricity to its shareholders at the cost price in accordance with the proportion of their participation in the project, for the use of electricity at the discretion of the shareholder, including the subsequent resale at market price. As the Finnish project is ran on BOO model, Rosatom will "own" a share in this venture respectively to its investment. (Interviewee 3, 2016.) This is the

financial advantage the Corporation will receive from participating in the project. Another strength of this PPP project, is that Rosatom will recommend itself on the European market. The main presence of the Corporation in NPP construction is shifted to the East, while all European projects are mostly related to the supply of nuclear fuel and radioactive technology services. The Corporation has some perspective projects in Europe on the negotiation stage, and the Finland is the first country after Turkey to sign the contract on NPP construction (Appendix 2).

### Opportunities

In this part of the SWOT analysis, the external advantages of PPP contracting will be disclosed. PPP project model allows sharing the burden of operation with the customer, which increases confidence in the corporation and trust in its activities. This advantage makes the PPP models more attractive to use within the international projects. It is also important to consider that the BOO project model opens access to an opportunity to build a nuclear power plant on the territories of a greater number of countries-newcomers, because the states' partner will be the world authority in the nuclear industry - the State Corporation "Rosatom", which allows to adjust operation, maintenance and subsequent decommissioning (Interviewee 1, 2016). As the project in Finland is a greenfield project, there is an advantage, that the company-executor will lead the process on all significant stages of its implementation. A big opportunity for the PPP projects, and especially in the nuclear power industry, is that all these contracts are long-term ones. This will lead to the intergovernmental partnership for a period of at least 100 years (the lifespan of the NPP is about 10 years of construction + 60 years of active exploitation + 20 years for possible extension period, and about 10 years of decommissioning) and will stimulate further relations on new projects (interviewee 4, 2016). Furthermore, nuclear energy is an inexhaustible resource, compared to coal, gas, and oil, and will provide stable volumes and capacities of energy for a long period. Last but not least, the PPP project will create thousands of working places both for Russian and



Finnish workers for a long period of time, from the construction stage, to the operation and maintenance phase.

### Weaknesses

In this part of the SWOT analysis, the internal weaknesses of the project implementation will be discussed. The need to attract a large volume of debt financing due to the absence at the present time of sufficient free volumes of financing may become a threat to the corporation (Interviewee 4, 2016). Also, the project will have to be designed according to Finnish national standards in the field of nuclear safety, as well as for civil codes and operation rules. As it was mentioned earlier, Rosatom has had NPP construction projects in Eastern countries; therefore, it could become an issue for the company's project managers to transfer their experience to European realities and norms. This issue will relate to all further international projects of Rosatom – each country has its legislative and regulatory peculiarities, what hinders the creation of one universal model of the project, which the company can offer – each project has to be specialized to each environment.

### Threats

In the final part of the SWOT analysis, the external threats will be described. Firstly, the main regulatory body in Finland – Radiation and Nuclear Safety Authority (of STUK) demands careful and strict compliance with stringent requirements in all aspects of NPP security, creating in this regard, additional control procedures (security audits, inspections, reporting, etc.) that can slow down the implementation of the project. Rosatom can face such problems in any country of presence, especially in Europe, and will have to deal with control bodies by satisfying all the compulsory requirements which need to be listed in the contracts. Moreover, minimizing the number of operational staff is one of the fundamental requirements of the customer. Such requirements to the number of personnel are associated with the desire to save on operating costs and wages. However, the technological processes at nuclear power

plants must be highly automated then and this requires high capital costs for instrumentation and control (I&C) and the special training of staff. (Interviewee 4, 2016.) This is not a threat to the PPP project model of relations itself, but issues like this create construction risks, including in excess of the terms and the design value of the property, making the project implementation significantly expensive and complex. In addition, the prices of electricity are relatively low in the Nordic market, thus, the future profitability of the plant is not known. (Anderson 2013) Such problems are common in many regions, which may pose a threat to the proposed profitability of the plant. But it is estimated, that even due to the high costs of construction and maintenance of the NPP, it will pay off. Finally, the NPP construction and operation is always associated with environmental risks. The foremost priority of Rosatom is safety (see Values of Rosatom), and the company guarantees the safety of the construction and operation of the plants by following the most recent safety requirements. But, nobody is one hundred per cent immune to catastrophes.

#### 6.2.4 PESTel Analysis

The PESTel analysis is a strategic analysis that characterizes the study of the environment of the enterprise, identifying opportunities and threats. This analysis studies such aspects of the environment, as Political, Economic, Social, Technological, Environmental, and Legal. These external factors must be concretized in order to observe the changing environment of nuclear energy and potential influence of these factors on the company.

To assess the external environment, the challenges and opportunities of the company in the sphere of PPP-contracting, the following areas should be analyzed:

1. Forecast of Socio-Economic Development of the Russian Federation, the economic tasks of the Russian Federation - development of the

nuclear sector of the economy; the current status and development trends of science, technology, innovation and industry spheres;

2. State policy in the sphere of the nuclear power – directions of the development of the sector, intergovernmental agreements and contracting on the background of current political events; as well as the analysis of the strategic development of the foreign companies in the nuclear industry, problematic issues of works, supplies and services of national and foreign enterprises;

3. Current status and development trends of the State Corporation "Rosatom". Wide benchmarking is performed on the basis of the analysis of the strategic documents of companies, annual reports, management presentations and conducted interviews.

The studies of internal and external environment are systemic and multifactorial process. Interpretation of the results allows classifying, analyzing businesses' processes, competitive advantages, to diagnose problematic areas and potential growth points. Also, PESTel-analysis allows improving the efficiency and mainly determining or adjusting the strategic goals, objectives, and performance indicators in the future.

The analysis of the external environment changes and their impact on the nuclear industry and the company activities is briefly shown as bullet points in Table 5.

TABLE 5. PESTel-analysis of the nuclear industry

<b>POLITICAL</b>	Partnership discontinuance due to the political tension in intergovernmental relations -> reduction of orders on PPP with foreign partners, limitation on distribution of presence -> search for new markets in benevolent countries (South America, Asia)
<b>ECONOMIC</b>	National currency devaluation -> PPP implementation price increase for Rosatom  New financial crisis -> order rejection or suspension for indefinite term
<b>SOCIAL</b>	Requirement of the host countries to maximize national participation and transfer the technology -> project price decrease, unfair price on offered service
<b>TECHNOLOGICAL</b>	Technology development (VVER) -> Rosatom has advantage on rivals -> competitiveness increases  More countries enter the industry -> new technologies due to country specifications
<b>ENVIRONMENTAL</b>	Fukushima catastrophe -> growth of environmental protest -> NPP construction decreases -> new standards of safety
<b>LEGAL</b>	Number of requirements in the contracts increases -> higher complexity of implementation  Increasing control on the industry -> bureaucratic threat

## 7 DEVELOPMENT PLAN

This chapter is written after the empirical research was completed and the results were reported in the previous chapter. The aim of this part of the thesis is to establish a development plan for future ventures of the case company in the PPP project sphere, based on the findings from the research. The key issues that require improvement are to be summarized and reported in this chapter. These issues will be followed by the suggestions based on the acquired knowledge, professional experience of the interviewees and personal conclusions of the research author. The suggestions for improvement of the PPP model of relations will be made on the basis of the McKinsey 7-S Model business analytic tool.

### 7.1 McKinsey 7-S Model

In this part of the research, McKinsey 7S model (Kahn 1957) can help to improve internal business processes of the case company and determine the successful direction for the development strategy for the future in general and in direction of PPP in particular.

#### 7.1.1 Shared Values

The system of corporation's values is documented and presented in the annual reports of results of activities in the strategic overview. Thus, the created system occupies an important place in the determination of the company's directions for the future and defines the corporate culture to be followed by every member of the team. Not by chance, the "One Team" element is mentioned foremost – the definition of common goals helps to exclude the possibility of disorientation. Another important value, which drives the corporation forward, is being one step ahead – industry leadership takes an important place in the corporate culture of the company and is traced within the strategy, objectives for the future and development activities. This element is followed by supplementing value of respect towards employees and customers, and, of course, towards historic heritage of the industry. Efficiency of the internal processes and

personal responsibility for the results of the company ensure the stable operating environment on all sites and can guarantee the implementation of the strategic goals. One of the most important values of Rosatom is to provide safe environment both in countries of foreign presence and in domestic plants.

The values of Rosatom are consistent with the mission of the company “to promote competitiveness of the Russian Federation”. The leadership on domestic and foreign markets can be achieved by abidance by the value system in achieving safe competitive framework, created by motivated broad-minded people, engaged with the goal to improve the corporate image. By observing the financial indicators for the recent years, it can be said, that the value system is confidently embedded and accepted by the team of the corporation.

### 7.1.2 Strategy

The corporate strategy implies concentrating on improving the efficiency of the nuclear power business which should lead to an increase in financial and economic indicators. The strategic objectives of Rosatom are expected to be accomplished via expansion of market opportunities through competitive integrated offer of public-private partnership (see Integrated Offer, Chapter 5), increased investment in R&D, and active diversification with the adjacent segments of infrastructure. The policy of achievement of strong market positions is accompanied with appropriate strategic actions. Rosatom can offer a wide range of services attractive to the foreign countries and in this way receives a competitive advantage in the industry market. Furthermore, even in the conditions of the unstable economic situation, the corporation is flexible to the fluctuations of demand and is always capable of offering the services in accordance with changing economic, political, and technological environments. Due to the specificity of the industry, the environmental question is a vital aspect of the company’s activity, and Rosatom is able to ensure the reliability and sustainability of the offered service, providing guarantees to their partners.

### 7.1.3 Structure

There are approximately 350 organizations and enterprises which constitute the corporation. The decision-making power is centralized and is executed by the governing body and the CEO Sergey Kiriyenko. The activities of the Corporation are monitored by the supervisory board.

The company management is carried out by the divisions, such as uranium mining, production of nuclear fuel and uranium enrichment, machinery engineering, construction of NPP in the Russian Federation, construction of NPP abroad, nuclear icebreaker fleet, and nuclear energy technologies, including ones for non-energy markets. The directions are regulated by executive officers, except issues of choice of strategic directions and partners. (Interviewee 1, 2016.)

The ascending hierarchy is the system of the company's activities administration, which allows the industrial divisions to operate independently, addressing the strategic issues to the governing body. This allows the corporation to eliminate the bureaucratic component, inherent to Russian enterprises.

### 7.1.4 Systems

As was mentioned above, the company processes in general are operated by the Governing body and monitored by the Supervisory board. Also, there are executives in the Corporation, responsible for the international business division and PPP projects in particular, corporate functions director, financial director, responsible for the economic stability and financial development, risk manager, who's obligation is to determine, evaluate and hedge the risks, and director on development and restructuring.. These executives monitor the big processes within the company and are responsible before the Governing body. The results of the internal activities are analyzed on the annual basis on the system of key performance indicators, established every year. These indicators evaluate economic, financial performance, mastering of the foreign

contracts portfolio, and productivity of power plants and overall technological condition.

#### 7.1.5 Style

The interrogation of divisions is conducted on the professional and formal level. The subordination principle is adhered strictly, what refers to one of the core values of the company – respect to each other. However, that does not mean the absence of internal communication and cooperative problem-solving. One of the practices, successfully employed within the Corporation, is mentoring. Employees, recently hired for a working place are not left for themselves, but they are led by more experienced colleagues. This practice increases the level of trust and professionalism, as the probation period decreases and allows new employees to start working in a team as soon as possible. Moreover, mentoring cultivates the team spirit and the principle of cooperation within the organization. (Interviewee 1, 2016.)

#### 7.1.6 Staff

In total, Rosatom employs 258,000 people. (Rosatom, 2014) The positions on production and construction sites are fully complemented with professional workers, so that the internal processes are administrated properly. However, due to the appearance of the emerging division of NPP construction abroad, this direction requires introduction of project managers, sufficiently competitive in the sphere of PPP projects and capable to integrate into the working process immediately. The experience of international projects on the BOO model is very poor yet, so, qualified people, able to work in the multicultural environment of high specificity are needed.



### 7.1.7 Skills

After the probation period, professionals hired to work in Rosatom get familiarized with the work he or she will have to do on the position he or she occupies. Moreover, there is a classical practice for the company workers of various divisions to attend special trainings conducted several times a year in order to master the new skills required for the work, when new requirements appear. In order to evaluate the level of the work done by each employee, the system of key performance indicators is used. These indicators are established for each division of the organization in a form of goals the employee has to achieve by the end of the year. Then, employee evaluates his performance his/herself, and after that, the head of division evaluates the job the employees have done. Each worker receives the grade on A-F system, indicating the level of performance he or she has shown. On the basis of the grade, not only the remuneration depends, but also the career possibilities of the employee. The evaluation may show that the employee occupies the proper position, or already deserves promotion to a new position, or, conversely, does not manage with the responsibilities on an expected level. This system of evaluation allows to manage the human resources effectively and to offer good career opportunities.

## 7.2 Suggestions for the Future Projects

From the analytical manipulations, conducted in this research, it can be concluded, that the State Atomic Corporation Rosatom is a sustainable, reliable player on the nuclear energy market. For the 13 years of operation, it has proven its stability and its capability to offer high quality production and services. The Corporation has successfully entered the global market, and already holds the leading positions in a number of segments of nuclear energy industry. The corporate organization is smartly structured, allowing creating a solid mechanism, in which every employee knows his or her responsibilities and surely occupies the

suitable position accordingly to knowledge and experience. Such model lets the company to turn toward the direction of international development.

Rosatom has recommended itself as a trusted conductor to the nuclear energy industry for the countries-newcomers. The division of NPP construction abroad started with the “turnkey” and EPC projects (Engineering-Construction-Procurement), implemented in Hungary, China, Iran, India. The potential of this model of intergovernmental relations has justified itself rapidly, leading to the expansion of the company’s portfolio for the next decade. Nowadays, Rosatom practices the new type of partnership – BOO model of public-private partnership. This model has been already implemented in the projects in Turkey and Finland. The last one is very important for the future growth of the Corporation’s influence on the market, as Finland is a member of the European Union. Thus, Rosatom will have an experience of working in the EU space, following its regulations and cooperating with regulating bodies.

Due to the self-sufficiency and sustainability of the Corporation, Rosatom can confidently continue the strategy of global market penetration. The risks on the market of nuclear energy now are higher than usually, caused by the slowing down of the pace of the Russian economic development and expected decrease of the nuclear energy consumption due to the demand on cheaper energy produced by TPPs. But this risk can be liquidated using derivative financial instruments for hedging NPP costs from growth. The more significant risk, that the Corporation faces, is the reputational risk. The risk may increase due to the negative forecasts of the Russian economy, aggravation of international relations with Russian Federation, and steadily negative world dynamic of the uranium price level. This deteriorates the profitability of the current uranium mining and increases the overall prices on the Corporation’s services respectively.

At this stage, in order to reduce the financial and political tensions, the PPP projects should be actively lobbied within the Corporation. First of all, it was mentioned previously, that the partnership in the NPP construction sphere is a long-term one, lasting approximately one hundred years.

Moreover, the contracts in this industry are extremely complex, and their implementation undoubtedly will require close partnership and collaboration of parties. As a trusted reliable company, Rosatom can demonstrate the Russian business as trustworthy and high quality opportunity. At the same time, the benefits for the Corporation are evident – the BOO model allows Rosatom decreasing investment volumes (comparing to “turnkey” or EPC models) and sharing the financial advantages of the partnership. It was said, BOO project in Finland is a great opportunity to penetrate the European market, especially when Rosatom has a top quality service to offer. Rosatom has its own social responsibility program, and it includes charity ventures, socially significant programs to help vulnerable stratum and the natural heritage, and program of contribution to the development of the regions of presence. The last one is currently implemented on the territory of the Russian Federation, but as an advice to improve the image, some investments and social programs could be built up in the foreign countries. This may include educational programs for young people to attract them to the industry, ecological beautification of the regions of NPP allocations, or charity foundations, donating funds for destitute people.

Some of these initiatives may be considered by the company management and applied in the future projects. In that way, the Corporation’s positions may be regained and, possibly, reinforced.

## 8 CONCLUSION AND SUGGESTION FOR FURTHER RESEARCH

This section is meant to summarize all the findings and results of this research. Suggestions for further studies are discussed at the end of the chapter.

### 8.1 Answers to the Research Questions

Summing up all the analyses of a public-private partnership, this new form of relations between the state and private business seems favourable. Firstly, the public-private partnership is one of the mechanisms of a mixed economy, allowing a development of a relationship of business and government. Secondly, it is an opportunity of finding the state budget revenue source. The private sector finds the possibility of possession and disposal of state and municipal assets, as well as the possibility of obtaining various privileges provided by state. Thirdly, the unification of efforts of the state and private business in the framework of specific projects forms a competitive advantage. Finally, this is a good mechanism for finding economic and social consensus in the conditions of an unstable economy. The introduction of new services and technologies, under influence of a reliable business, combined with the power of governmental agencies, may recover the suspended partnerships and thaw collaboration of governments.

Public-private partnership in the modern world with proper and rational behaviour of parties is a mechanism that can be the basis for creating the high-tech corporate structures designed to set the business directions and face the challenges associated with the exit of the economy from the financial crisis.

The conducted research was able to answer the research sub-questions, stated in the first chapter in order to help answering the main question: **how can PPP lever the company's economic development in Russia?**

TABLE 6. Answers on research questions

RESEARCH QUESTION	ANSWER
What are the benefits of public-private partnerships for the parties in terms of the insatble economy?	Expectation on high efficiency of the partnership is one of potential benefits, as well as finding reliable long-term partners, able to attract funds to state projects.
- How does the public-private partnership implementation in foreign countries differ from this model of operation in Russian Federation?	PPP in Russia and in other countries mainly differ by the level of state regulation on legislative level. Also, not all the sectors, in which PPPs could be implemented in Russia are explored as they are, for instance, in Europe.
- What are the problems that hinder the development of public-private partnership mechanism?	Firstly, there is a trust issue to private parties and state institutions. Also, there is a lack of government attention to this model, as well as lack of structure in regional development programs.
- What are the opportunities and the development directions of the public-private partnership model in Russia?	The most important advantage of PPP is an attraction of attention to the less developed sectors. Also, there is an opportunity of optimization of financing and reduction of government's investment costs, what will allow allocating those funds on other needs.

*- What are the benefits of public-private partnerships for the parties in terms of the insatble economy?*

State analyses the advantages of participation in the PPP projects, first of all considering expectation of the high efficiency of the partnership. Decision of the state whether to participate in the PPP or not is always preceded by the analytical work, if the partnership will stimulate the

effective development of the sectors. Further, appearance of new sources of investment is an important factor. PPP allows the state to gain access to alternative sources of capital, making a real implementation of important and urgent projects that would not be possible under other conditions. Moreover, the proof of reliability of the results is one of the vital elements of partnership. Reliability of achieving positive results is guaranteed by the timely implementation of the project, as well as stated in the contract procedure of return on investment and compensation of expenses. Finally, innovation has a big importance in evaluation of the project. The unique combination of features of public and private sectors determines a high potential of innovative approaches to the creation and management of public infrastructures under a PPP project.

Private business analyses the advantages of participation in the PPP projects, considering firstly the duration and conditions of partnership. A private company gets a long-term ownership and right of operation of state assets, thus providing a stable profit generation in the long run. Secondly, through the investment, the entrepreneur receives a guarantee of their return, as the state as his partner agrees to provide mutually acceptable level of profitability. And finally, with economic freedom, a private company may increase the overall profitability via increase in labour productivity and innovation during the period of the contract with the state partner. Receiving the state assets for the management and increasing the profitability of the business is a condition for the stability of the company.

*- How does the public-private partnership implementation in foreign countries differ from this model of operation in Russian Federation?*

The fundamental factors of PPP success in the global experience are the political will of the state, the availability of the necessary regulatory framework and PPP control system. Also, the presence of project flow, depth of the study of contracts and the opportunities of financial markets to provide financing for the project are vital for the sustenance of the mechanism. Finally, the high level of legal and economic training of managers and specialists of executive bodies involved in PPP projects,

professional skills of the project participants, and the parties' willingness to compromise and to find ways of resolving disputes in terms of PPP projects are required. Comparing Russian and foreign experience, Russian legislative system concerning PPP is still non-mature and requires improvement. Also, the spheres of the PPP implementation could be expanded in Russia, as in the developed countries this model of relations is used much broadly.

*- What are the problems that hinder the development of public-private partnership mechanism?*

On the way of PPPs implementation in Russia appears a number of conceptual barriers. Firstly, according to the exceptional and in most cases reasonable distrust to the State, Russian business prefers to work only on terms of ownership of the facilities. Secondly, there is a lack of attention from the government and businesses to modern schemes of PPP project financing facilities. Thirdly, there is a lack of comprehensive long-term regional development programs and distribution of productive forces, considering the interests and capabilities of both the public and private sectors. Moreover, it is a generally accepted fact that there is the lack of adaptation of the Russian legal system in the field of financial markets to the standards that investors, especially foreign ones, are accustomed to working with. Finally, the PPP problem in Russia is the risk of misconducting of parties' obligations, for example, violation of the terms of project financing or problems with long-term projects credit.

*- What are the opportunities and the development directions of the public-private partnership model in Russia?*

Among the opportunities of the PPP model of relations, there are improving of economic efficiency, more rapid implementation of the most significant infrastructure projects, and acceleration of the development of the regions. Also, there is a possibility of improving the mechanisms and service delivery models, due to the responsibility of the private business in terms of financing and reputation. Another important issues that could be solved, are a relief is a reduction of investment costs, and easement of the

burden lying on state administration of the state projects. Finally, there is an opportunity of optimization of the financing structure through the use of national and (or) international support and expansion of access to the new sources of finance.

## 8.2 Reliability, Validity and Suggestions for Further Studies

Regarding the validity issue, the final objective of this research was reached and the research questions have been answered properly. The theoretical data and empirical part of the thesis have been written using the number of reliable academic sources. First of all, theoretical part of the research was composed from the knowledge of the prior researchers published in professional books, journals, and guidebooks, as well as reliable up-to-date on-line sources. Besides secondary and tertiary data, used to answer the research questions, the primary data acquired in the form of interviews with the case company insiders has been used as well. Therefore, this study can be considered as highly valid. As the interviews were the only sources of the primary data, there was conducted a bigger number of them, than expected in the beginning of research planning. Thus, the information received with the interview method can be called reliable, as the answers and general position on the matter of PPP project implementation were vastly similar and reflected the official position of the company. In case of repetition of the interviews, the information given by the company representatives will not differ from collected, hereby the statement about the research reliability is confirmed.

The significant suggestion for the further research in this to study the financial matters of the PPP projects operation. As stated in the thesis structure, this research does not include financial aspect of the issue. This question should be thoroughly studied, in order to complete the picture, of what are the benefits and the disadvantages of this model of interstate relations comparing to the other types.



## SUMMARY

The economy in Russia is balanced between a collapse with the following default, caused by the political tension in the world, and recovery, both political and economic. In this period of threshold and disorientation, it is vital to find a method to save the situation. One of the initiatives, how the situation in Russia could be improved, is the concept of public-private partnership. The aim of this research was to evaluate this initiative on the example of the case company and to rate its effectiveness.

Throughout this study, a deductive research method of processing was employed with the assistance of a quantitative approach to data collection and analysis. The secondary and tertiary data used in the research was gathered from reliable books, Internet sources and professional journals and publications. In turn, the primary data collection was completed via interviews with case company insiders. All this information was analysed and transformed into the form of comprehensive visual matrixes and conclusions.

The study was introduced to the reader by disclosing the goals of the conducted research, and the questions, addressed to give an answer, what is the event of PPP and how could it help in the economy development.

This part of the study was followed by a familiarization of the concept of PPP, theoretical base, used in the study, and first conclusions, how this model of projects is implemented in the global experience. PPP - a reliable and effective mechanism for growth, which also contributes to the introduction of higher standards of management of the private sector in social services. Areas of use of PPPs are varied and promising. The objective of the PPP is to use the advantages of both forms of property without profound social change and upheaval on the principle of equal cooperation.

The most significant part of the research is the analysis of the case company Rosatom, its internal and external activities, and the general

influence of using the PPP contracting on key performance indicators. It can be concluded, that the PPP opens new directions of development of portfolio of the company and its financial situation on domestic and global markets. This model of relations disclosed the opportunity of effective international cooperation, but still requires improvement of aspects, influenced by both internal and external factors, such as political instability, reputation matters, and prices on energy. All of the risks the Corporation may face could be managed through responsible company administration.

Thus, it can be said that the implementation of the projects on PPP model is a potential advantage for both parties of the contract, not only in terms of risk sharing, but also in terms of the confidence in the performance of specified procedures properly. For this reason, the PPP projects direction is actively developed recently in Rosatom, and so should be the position of the Russian government.

To conclude, the conducted study managed to complete the assigned task of answering the main question of the research and to present the valid reliable results. First of all, PPP is one of the most important forms of business-government relations in terms of the mixed economy. Secondly, in the Russian Federation the primary elements of PPP have been introduced in the country's economy recently and are not developed as much, as this model is in, for instance, European countries, but the basis for development of these types of relations has been created. Moreover, it can be said, that the PPP is an effective tool for shaping economic policy in conditions of instability, both on domestic and global markets. And finally, PPP gives the direction to the innovative development of the economy, optimizing investments and spreading the influence on wider regions and industries.

All of the above indicate the importance of studying the formation and development of the institutes of public-private partnerships, designed to play a significant role in the development of modern market structures and relations. Also, this study suggests directions for future research, to make this field of knowledge complete in its findings.

## REFERENCES

### WRITTEN REFERENCES

Asodi, A., 2014. Interview with the Hungarian spokesperson on Atomic Energy. Moscow: Rosatom, Rosatom News

Bezançon, X., 2004. 2000 ans d'histoire du partenariat public-privé pour de réalisation des équipements et services collectifs (Free translation: 2000 years of history of public-private partnerships for the realization of social needs). Paris: Presses de l'Ecole Nationale de Ponts et Chaussées.

Blackstone, A., 2012. Sociological Inquiry Principles: Qualitative and Quantitative Methods (v. 1.0). Maine: Sailor.

Cadle, J., Paul, D. Turner, P., 2010. Business Analysis Techniques: 72 Essential Tools for Success; BCS.

Crampes, C.; Estache, A., 1998. Regulatory trade-offs in the design of concession contracts. Washington: World Bank.

Federal Law No 116-FZ "On Special Economic Zones in the Russian Federation" of 22 July 2005.

Glazyev, S., 2008. The crisis of the global financial system: Threats and Opportunities for Russia. Journal "Financial analytics: problems and solutions", №10.

Gordeev, A., Kisekev, K., 2008. The mechanism of state-private partnership in the field of science: who can switch it on?). Moscow: Academic Council (Гордеев, А., Киселев, К., 2008. Механизм государственно-частного партнерства в сфере науки: в чьей воле его запустить? (Free translation)).

Grimsey, D., Lewis, M., 2002. Evaluating the risks of public private partnerships for infrastructure projects. International Journal of Project Management. Melbourne: PricewaterhouseCoopers.

Guidebook on Promoting Good Governance in Public-Private Partnerships, 2008. New York and Geneva, United Nations Economic Commission

Hoepfner, R., Gerstlberger, W., 2003. Public Private Partnership – Ein Leitfadens für öffentliche Verwaltung und Unternehmer, Dokumentation (hrsg. Durch die Arbeitsgemeinschaft für wirtschaftliche Verwaltung/AWV im Auftrag des BMWA – Bundesministerium für Wirtschaft und Arbeit), Eschborn.

Humphrey, A., 2005. SWOT Analysis for Management Consulting. SRI Alumni Newsletter (SRI International).

Kahn, R., Cannel, C., 1957. The Dynamics of Interviewing: Theory, Technique, and Cases. John Wiley & Sons Inc.

Kananen, J., 2011. Rafting Through the Thesis Process: Step by Step Guide to Thesis Research 1st edition. Jyväskylä: JAMK University of Applied Sciences .

Khanom, N., 2010. Conceptual Issues in Defining Public Private Partnerships. (PPPs). International Review of Business Research Papers, Volume 6.

Khodos, D., Stepanova, L., 2012. Public-private partnership: problems of development). Moscow: Russian Entrepreneurship. (Ходос, Д., Степанова, Л., 2012. Государственно-Частное партнерство в России: проблемы развития (Free translation)).

Kloosterman , V., 2014. What Are the 5 Risk Management Steps in a Sound Risk Management Process? Available on Continuing Professional Development website: <http://continuingprofessionaldevelopment.org/risk-management-steps-in-risk-management-process/>

Mamchenko, O., Dolzhenko, I. (2010). The economic essence and the role of public-private partnerships in the implementation of regional economic policy. Scientific journal "News" of the Altai State University.(Мамченко, О., Долженко, И., 2010. Экономическая сущность и роль государственно-частного партнерства в реализации региональной экономической политики. Научный журнал «Известия» Алтайского государственного университета. (Free translation)).

Marques, R., Berg, S., 2010. Risks, Contracts and Private Sector Participation in Infrastructure. University of Florida.

Marques, R.; Berg, S., 2009. Revisiting the strengths and limitations of regulatory contracts in infrastructure industries. PURC Working Paper 14, University of Florida, Gainesville. Forthcoming in Journal of Infrastructure Systems.

Orlov, A., 2008. Basic Course of History of Russia. Moscow: Prostor.

Porter, M., 2008. Competitive strategy: Techniques for analyzing industries and competitors. Harvard Business School.

Public Private Partnerships. High School of Economics, 2011. Moscow, HSE (Частно-государственное партнерство. Теория и Практика, 2011. (Free translation)).

Public Private Partnerships. Risk Management, 2002. Queensland Government.

Resolution of the government of the Russian Federation No 784 "On creation of a special economic zone in the territory of the republic of Tatarstan, Elabuga region" of 21 December 2005.

RF Government Resolution dated June 2, 2004 № 263 "Regulations on the Board on Competitiveness and Entrepreneurship at the Russian Government."

RF Government Resolution dated November 23, 2005 № 695 "On the Governmental Commission for investment projects of national importance."

Saunders, M. Lewis, P., 2009. Research Methods for Business Students. Pearson, 5<sup>th</sup> edition.

Saunders, M. Lewis, P., 2012. Research Methods for Business Students. Pearson, 6<sup>th</sup> edition.

Savchenko, I., 2014. Public-private partnerships in Russia: current state and problems of development). News of the Far Eastern Federal University. Economics and Management. (Савченко, И., 2014. Государственно-Частное Партнерство в России: Современное Состояние и Проблемы Развития (Free translation)).

Savenkova, E., 2010. Problems of financial support mechanisms for activation of the process of innovation and investment in Russia's Regions). Moscow: Economic Sciences (Савенкова, Е., 2010. Проблемы финансового

обеспечения механизмов активизации инновационно-инвестиционного процесса в регионах России (Free translation)).

Teisman, G., Klijn, E., 2002. Partnership arrangements: governmental rhetoric or governance scheme? Blackwell Publishers Ltd.

The International Uranium Enrichment Center [Retrieved 5th March 2016].

Electronic resource – Available at: <http://eng.iuec.ru>

Tikhomirov, N., 2003. Methods of analysis and management of ecological and economic risks). Moscow: UNITI-DANA. (Тихомиров, Н., 2003. Методы анализа и управления эколого-экономическими рисками (Free translation)).

User Guidebook on Implementing Public-Private Partnerships for Transportation Infrastructure Projects in the United States, 2007. Federal Highway Administration (FHWA). Washington.

Varnavskiy, V., 2005. The partnership of the state and the private sector: forms, projects, risks. Moscow: Financist. №11, pp. 34-37 (Варнавский, В., 2005. Партнерство государства и частного сектора: формы, проекты, риски. Финансист. №11. с.34-37 (Free translation)).

Vecchi, V., Caselli, S., Corbetta, G., 2015. Public-Private Partnerships for Infrastructure and Business Development: Principles, Practices, and Perspectives. Palgrave Macmillan; 1st ed. 2015 edition (6 Aug. 2015).

Waterman, R. H., Peters, T. J., & Phillips, J. R., 1980. Structure is not organization. Business Horizons, 23(3)

World Bank Group. PPIAF, 2014. Assessment of the impact of the crisis on new PPI projects. Update 3.

Zhilina O., 2009. Public-private partnership: the stage of formation: the project approach to the management of public-private partnership. Moscow: Russian Entrepreneurship.

Zitron, J., 2004. PFI and PPP: Client and Practitioner Perspectives. Proceedings of 21st Annual Conference of the Major Projects Association, London: Major Project Association.

## ELECTRONIC SOURCES

Anderson, R., 2013. Energy bills: Who pays the most in Europe? [Retrieved 6<sup>th</sup> March 2016]. Available at: <http://www.bbc.com/news/business-25200808>

Belitskaya, A., 2011. Public-private partnership in the energy sector of Russia: legal aspect. [Retrieved 25<sup>th</sup> March 2016]. Electronic resource – Available at: [http://www.americanbar.org/content/dam/aba/administrative/environment\\_energy\\_resources/resources/belitskaya\\_energy\\_partnerships.authcheckdam.pdf](http://www.americanbar.org/content/dam/aba/administrative/environment_energy_resources/resources/belitskaya_energy_partnerships.authcheckdam.pdf)

Center of the development of public-private partnership.), 2016 [Retrieved 3<sup>rd</sup> March 2016]. Available at: <http://pppcenter.ru/> (Центр развития государственно-частного партнерства (Free translation)).

Deryabina, M., 2011. Report on autopsy scientific council of scientific direction "Theory of Economics", "Theoretical and practical problems of public-private partnership.". [Retrieved 10<sup>th</sup> February 2016]. Available on the site of the Institute of Economics RAN:

<http://www.inecon.ru/ru/index.php?go=Content&id=29>. (Дерябина, М., 2011. Доклад на секционном ученом совете научного направления «Теория экономики» «Теоретические и практические проблемы государственно-частного партнерства» (Free translation)).

Erofeev, A., Revzina, O., 2014. Sanctions and PPP in Russia: who wins? [Retrieved 25<sup>th</sup> February 2016]. Available at the website DorInfo: [http://dorinfo.ru/99\\_detail.php?ELEMENT\\_ID=21866](http://dorinfo.ru/99_detail.php?ELEMENT_ID=21866) (Ерофеев, А. Ревзина, О., 2014. Санкции и ГЧП в России: кто кого? (Free translation)).

European Nuclear Society, 2016. [Retrieved 27<sup>th</sup> February 2016]. Available at: <http://www.euronuclear.org/e-news/pdf/e-news-50.pdf>

Harris, C., 2003. Infrastructure Projects: A Review of Cancelled Private Projects. [Retrieved 22<sup>th</sup> February 2016]. Available on the World Bank Group website: <http://siteresources.worldbank.org/EXTFINANCIALSECTOR/Resources/282884-1303327122200/252Harri-010303.pdf>

Hayrapetyan, M., 2008. Foreign experience in the use of Public-Private Partnership: Policy Brief. [Retrieved 22<sup>th</sup> February 2016]. Published on the official website of the State Duma at: <http://wbase.duma.gov.ru:8080/law?d&nd=981605628&mark=r98160500>

(Айрапетян М.С., 2008. Зарубежный опыт использования государственно-частного партнерства: Аналитическая записка (Free translation))

House of Commons Hansard Debates, 12 November 1992, col 998 [Retrieved 17<sup>th</sup> February 2016]. Available at:

<http://www.publications.parliament.uk/pa/cm199293/cmhansrd/1992-11-12/Debate-1.html>

House of Commons Hansard Debates, 1998. [Retrieved 17<sup>th</sup> February 2016].

Electronic source – Available at: <http://www.parliament.the-stationery-office.co.uk/pa/cm199798/cmhansrd/vo980320/debtext/80320-06.htm>

International Atomic Energy Agency (IAEA), 2016. [Retrieved 26<sup>th</sup> February 2016]. Available at: <https://www.iaea.org/pris/>

International Atomic Energy Agency [Retrieved 22<sup>th</sup> February 2016]. Electronic source – Available at:

<https://www.iaea.org/NuclearPower/Meetings/2016/index.html>

Kloosterman, V., 2014. What Are the 5 Risk Management Steps in a Sound Risk Management Process? [Retrieved 4<sup>th</sup> March 2016]. Available on Continuing Professional Development website:

<http://continuingprofessionaldevelopment.org/risk-management-steps-in-risk-management-process/>

Korovin E., 2006. Credit risk projects of public-private partnerships and support mechanisms. Speech at the round table "The federal investor support tools," "Regionalistica" [Retrieved 10<sup>th</sup> February 2016]. Electronic resource – Available at: [http://regionalistica.ru/project/investproject/fed\\_instr](http://regionalistica.ru/project/investproject/fed_instr) (Коровин Е., 2006. Кредитный риск проектов частно-государственного партнерства и механизмы поддержки. Выступление на круглом столе «Федеральные инструменты поддержки инвесторов». // Сайт «Регионалистика». (Free translation)).

Private Finance Initiative, 17<sup>th</sup> Report of Session 2010-12, House of Commons, Treasury Committee. [Retrieved 17<sup>th</sup> February]. Available on the official website of the UK parliament:

<http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtreasy/1146/1146.pdf>



Public-private partnership in Russia, 2013. [Retrieved 25th January 2016].  
Available at: <http://www.ppp-russia.ru/> (Государственно-частное партнерство в России (Free translation))

Public-private partnership in Russia, 2013). [Retrieved 15<sup>th</sup> February 2016].  
Available on the website of the Center of development of Public-Private Partnerships:  
[http://pppcenter.ru/assets/docs/raytingREG-Block\\_26-03-2015\\_web.pdf](http://pppcenter.ru/assets/docs/raytingREG-Block_26-03-2015_web.pdf) (Государственно-частное партнерство в России, 2013. (Free translation)).

Rosatom Annual Report, 2014. Available as a hard copy and on the official website of the State Atomic Corporation Rosatom:  
[http://www.rosatom.ru/resources/0940a3004a03de62b0dff9e03862a3e4/anrep\\_rosatom\\_2014\\_public.pdf](http://www.rosatom.ru/resources/0940a3004a03de62b0dff9e03862a3e4/anrep_rosatom_2014_public.pdf)

Russian special economic zones, 2016. [Retrieved 15th February 2016].  
Electronic resource – Available at: <http://www.rosez.ru/> (Российские особые экономические зоны (Free translation)).

Student's Guide to Global Climate Change, 2016. [Retrieved 15th March 2016].  
Available at: <https://www3.epa.gov/climatechange/kids/>

The International Uranium Enrichment Center [Retrieved 5th March 2016].  
Electronic resource – Available at: <http://eng.iuec.ru>

Varnavskiy, V., 2009. Public-private partnership in Russia: problems of formation. Moscow: Notes of the Fatherland (<http://www.strana-oz.ru/?numid=21&article=988>).

Venediktov, A., 2015. Interview with Sergey Kiryienko, CEO of Rosatom. Moscow: ECHO MOSCVY. [Retrieved 19<sup>th</sup> March 2016]. Available at: [echo.msk.ru/programs/beseda/1570002-echo/](http://echo.msk.ru/programs/beseda/1570002-echo/)

## ORAL REFERENCES - INTERVIEWS

Interviewee 1, 12 February 2016. Head specialist on corporate activities

Interviewee 2, 16 March 2016. Head of the corporate development and international business department

Interviewee 3, 17 March 2016. Head of the international relations department of Rusatom-Overseas

Interviewee 4, 18 March 2016. PPP project manager

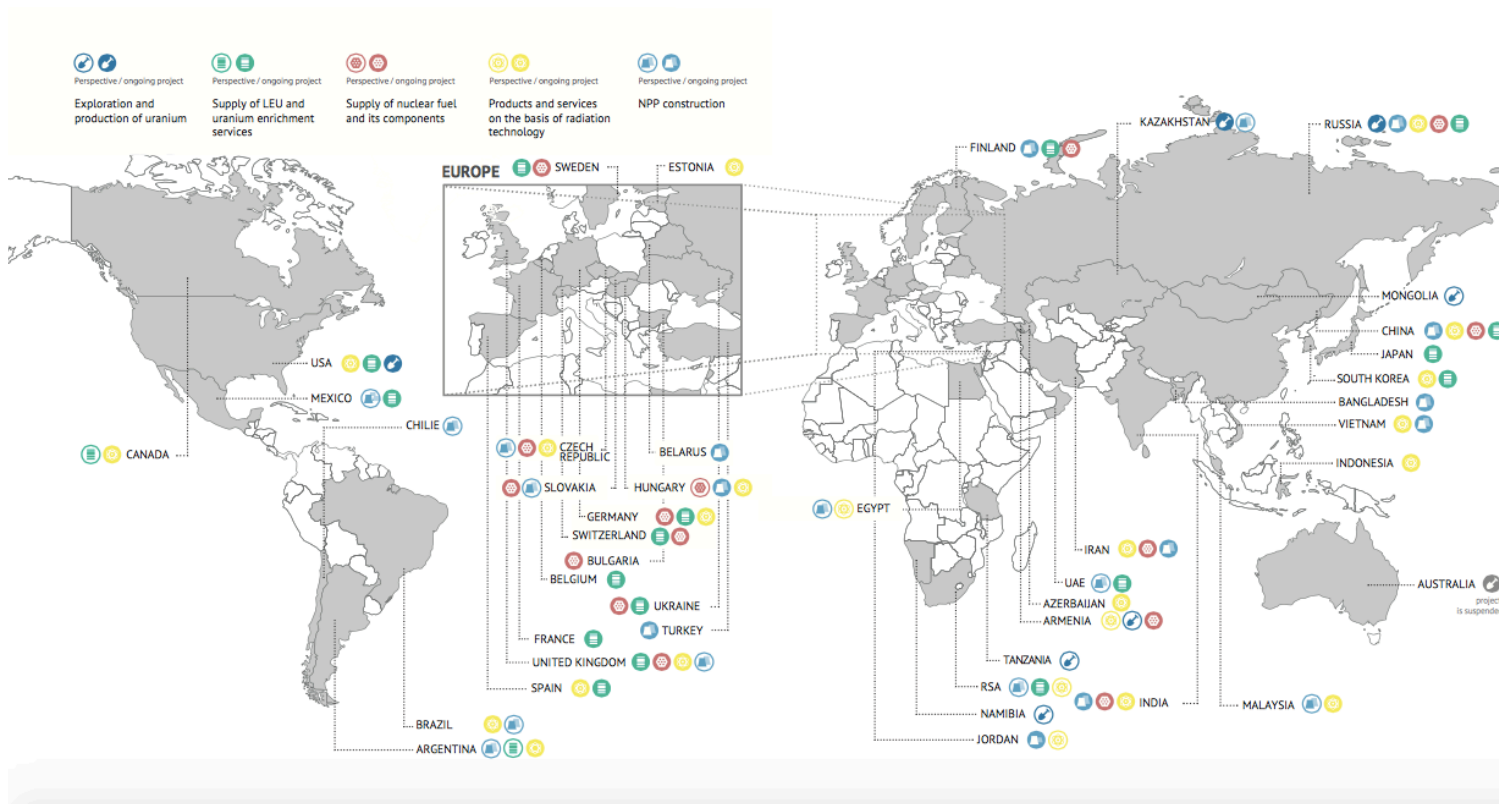
Interviewee 5, 18 March 2016. International project manager

## APPENDICES

### APPENDIX 1. Integrated Offer of Rosatom, Annual Report 2014



## APPENDIX 2. Map of international presence of Rosatom, Annual Report 2014

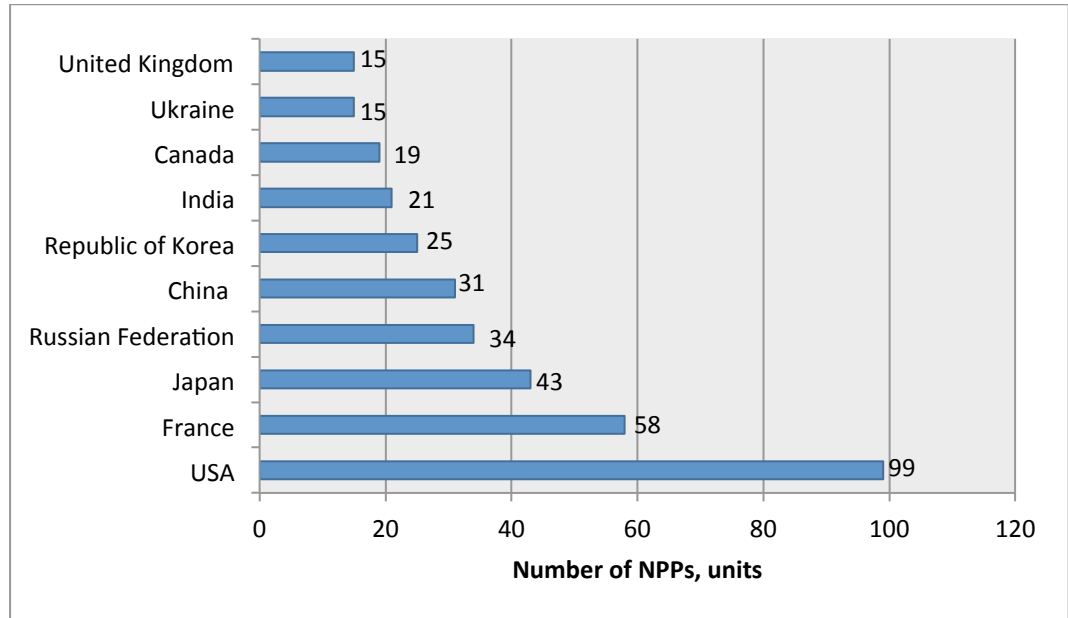


## APPENDIX 3. Interview Questions

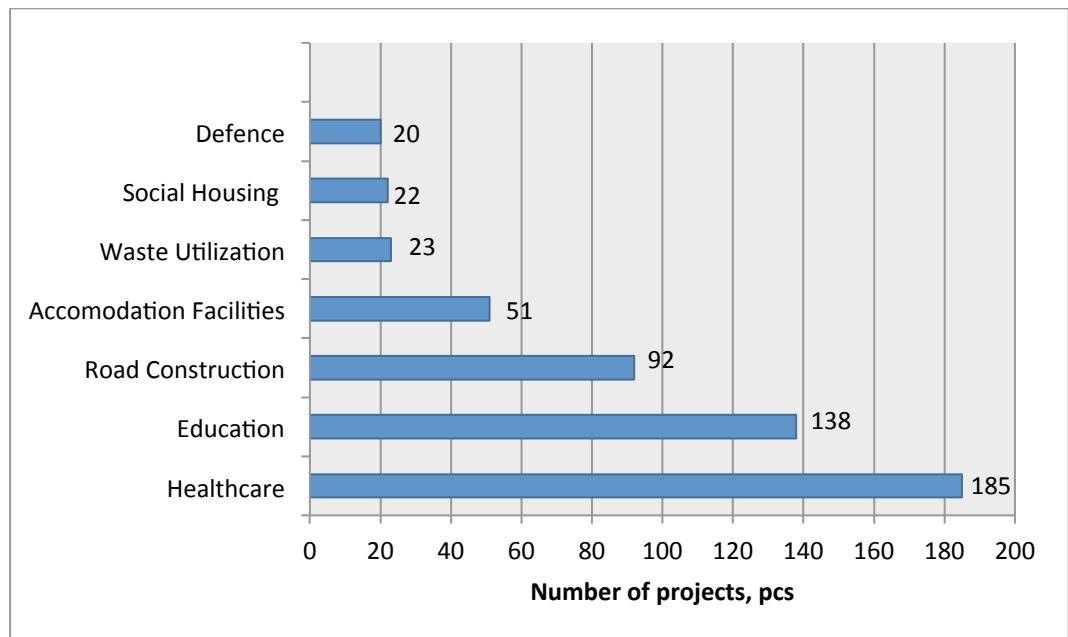
Interviewee 2	<ol style="list-style-type: none"> <li>1. What is Your company's business portfolio? What are the Corporation's nearest perspectives?</li> <li>2. How difficult it is to enter the energy market?</li> <li>3. How, on Your opinion, the portfolio could be expanded in the direction of the PPP projects?</li> <li>4. Which type of PPP does the Corporation use in the projects more often? According to the Annual report, it is BOO. Why?</li> <li>5. What is this type's advantage project-wise for the company? For the partners?</li> <li>6. What is included in the Corporation's responsibilities, what is understood by the Corporation under the term "operate" in BOO?</li> <li>7. How does the Corporation differentiate the EPC contracts and, e.g. BOO or BOT? Which of them are preferably to be used and in what conditions?</li> </ol>
Interviewee 3	<ol style="list-style-type: none"> <li>1. Who are the Corporation's main competitors in the energy market?</li> <li>2. What is the Corporation's competitive advantage</li> </ol>

	<p>comparing to rivals? What are the weaknesses, what the company cannot offer and for what reasons?</p> <ol style="list-style-type: none"> <li>3. Why do foreign states choose the Corporation's services, if some countries have their own energy and nuclear companies?</li> <li>4. How the interaction between the foreign state and the Company is built? And what is the mechanism of relations between Russian government and the company?</li> <li>5. What technological and financial support does the Corporation receive from the Russian government?</li> <li>6. What aspects are included in the intergovernmental agreements for implementing PPP projects?</li> </ol>
Interviewee 4	<ol style="list-style-type: none"> <li>1. How much does the Corporation depend on suppliers? On what extent is the corporation independent and what stages of the PPP projects it can implement by itself?</li> <li>2. What main obstacles do the Corporation face while contracting with foreign countries? Legal, environmental, ethical...?</li> <li>3. What can prevent foreign states from ordering from the Corporation?</li> <li>4. PPP project model is relatively new for the company (Turkey project, Finlnad project). Why has the Corporation decided to transfer to this model of relations?</li> <li>5. What can be improved in the Corporation's activities regarding PPP projects?</li> </ol>
Interviewee 5	<ol style="list-style-type: none"> <li>1. Does the company in the foreign market work only on greenfield projects, or it is employed for the projects of maintenance, operation etc.?</li> <li>2. How does the Company's "Integrated Offer", comparing to other companies, helps achieving superiority?</li> <li>3. What added values does the Corporation produce by its activities?</li> <li>4. What social responsibility does the Company borrow? How is it manifested?</li> <li>5. How can the Corporation achieve financial sustainability in terms of crises, sanctions, for example, with the help of PPP?</li> <li>6. How is the environmental sustainability is guaranteed within the business activities?</li> </ol>

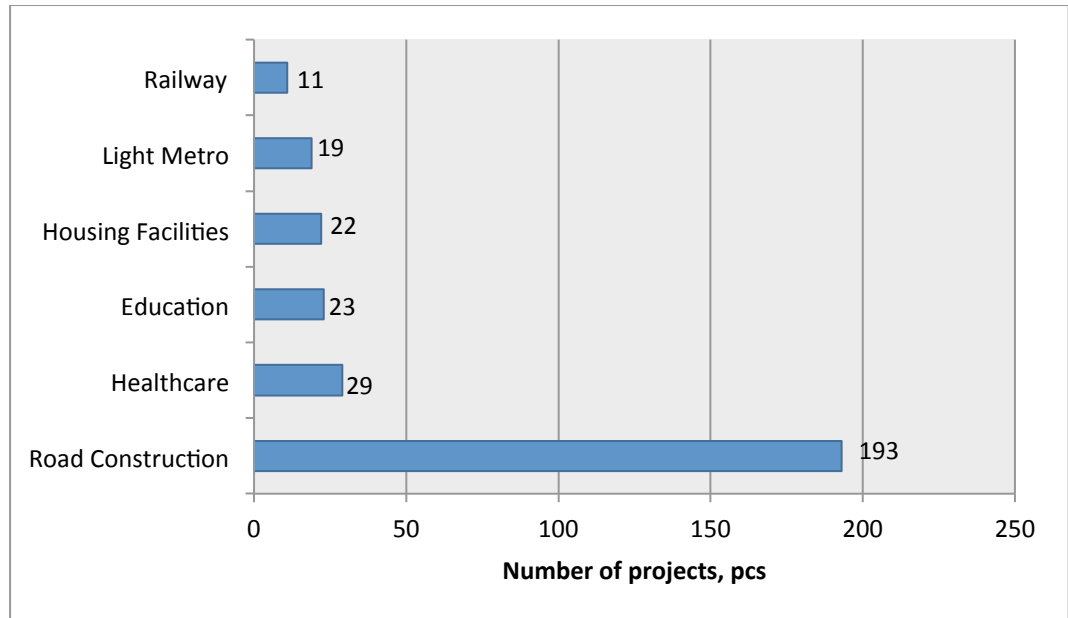
APPENDIX 4. Nuclear power plants world-wide, in operation and under construction, IAEA 2016



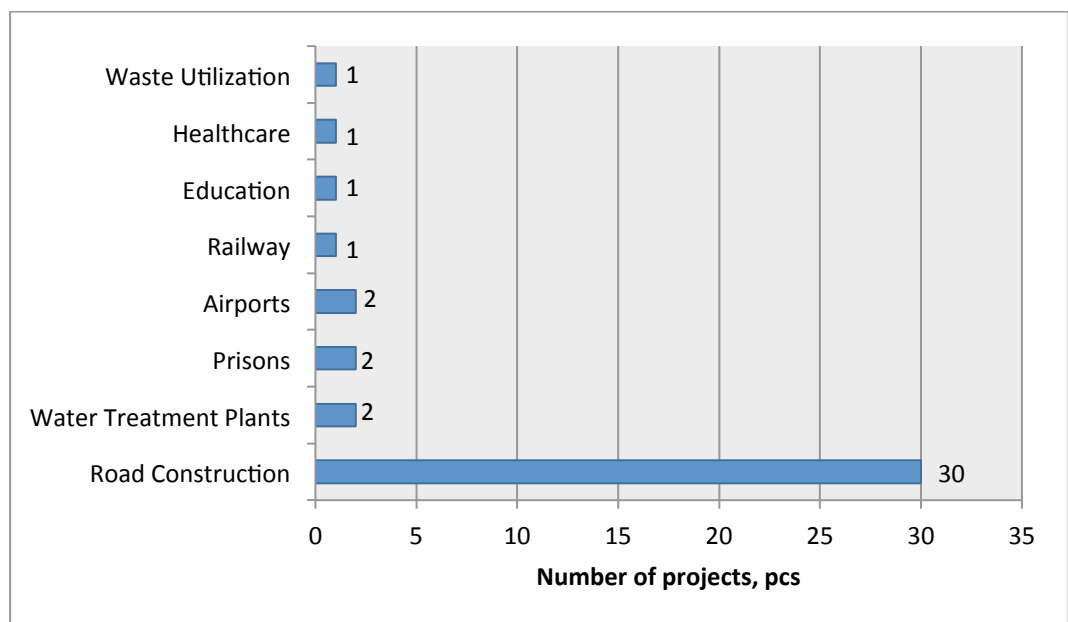
APPENDIX 5. PPP projects in the countries of «Big Seven», Hayrapetyan 2008



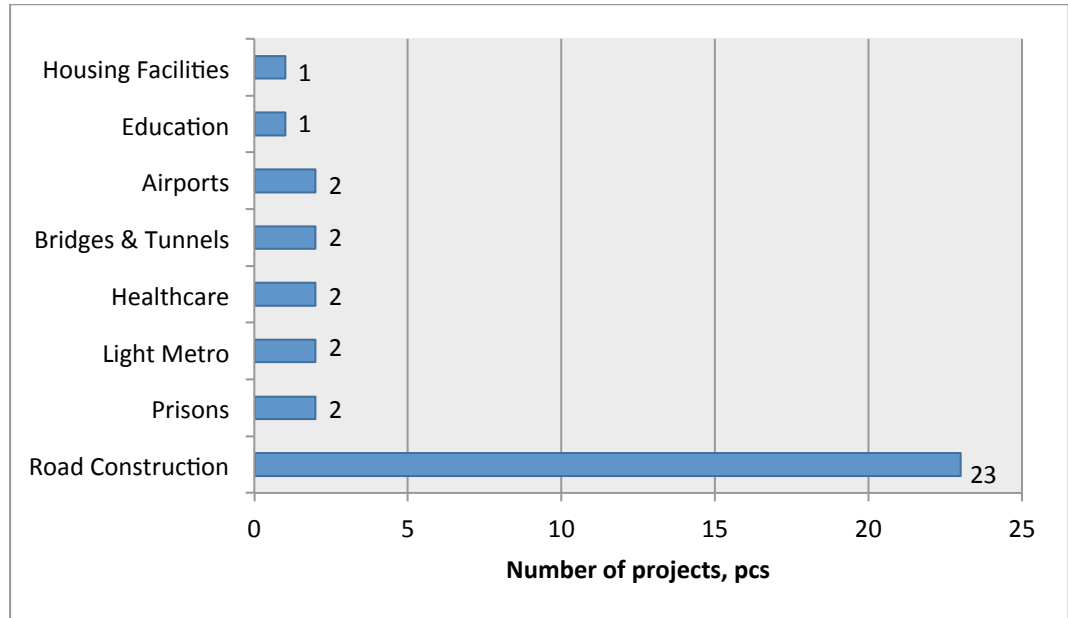
APPENDIX 6. PPP projects in the developed countries, Hayrapetyan 2008



APPENDIX 7. PPP projects in the developing countries, Hayrapetyan 2008



APPENDIX 8. PPP projects in the countries with transitional economy,  
Hayrapetyan 2008



APPENDIX 9. Nuclear Power Plant, A Student's Guide to Global Climate Change, 2016

