Corso di dottorato di ricerca in Scienze Manageriali e Attuariali

Ciclo (XXX)

Titolo della tesi

"PPP in theory and practice: The case of transnational PPP Healthcare Project in Russia"

Dottorando

Anastasiya Slonimskaya

Supervisore

Prof. Stefano Miani

Anno (di discussione)

2019

Summary

This work is dedicated to the in-depth study of the Public-Private Partnership arrangement, in particular its application in the healthcare sector in the developing/middle income countries and its analysis with the help of the case study approach on the example of the transnational PPP healthcare project executed by the Italian company in the Russian Federation. The paper aims to satisfy two "specular" objectives: to explore issues of the Russian market economic appeal for the foreign investor and its readiness to accommodate it as far as PPP undertakings in the healthcare sector are concerned, as well as opportunities opened up for the foreign investor together with newly arising challenges within a new PPP Russian paradigm. This research has an intention to contribute to the discussions on transnational PPP both from PPP model financial arrangement perspective as well as social and political components of the initiative in one of the largest emerging economy countries and important BRICS member.

PPP, a particular long-term contract between private party and public sector authority, has become one of the most popular and convenient tools used by policy makers to increase investment, to improve efficiency of the infrastructure services, as well as to substitute or renovate crumbling, outdated structures. Unlike developed economies where the PPP has already been used for a couple of decades, the CIS[1] countries, like emerging and developing ones started to pay attention to this method of infrastructure construction and management only recently. Despite the explicit interest and growing need for alternative modes and tools the application of PPP in CIS countries is still in significant delay with Russia being the most advanced country in this area which has only recently taken steps to regulate the matter of PPP, the particular reason why it has been chosen as the country at which to focus attention. Moreover, in the situation of inconclusive viewpoints and findings as well as fragmented knowledge, reported in the academic literature (Torchia and Calabrò 2018; Chung and Meissner 2011), what in its own right constitutes the gap in the existing literature, scarce evidence base and empirical analysis or evaluation of PPP in developing countries, if put against multiple research works focused on the USA and the UK (KS et al. 2016), as well as the novelty of the transnational PPP concept both in academic literature and among PPP practitioners (Yu et al. 2018; Hodge and Greve 2018) the need in more detailed study of these issues acquires paramount importance.

This work analyzed the challenges as well as rationale behind decisions of the company that enters a foreign PPP market of one of the emerging economy countries, quite new to this infrastructure implementation method. It also shed light on the reasons underpinning the developing country's decision on entering into complex PPP deal involving a foreign private

[1] Commonwealth of Independent States

partner. Through a single-case case study and qualitative research approach this study, by demonstrating the complexity of relations, challenges and considerations to be made by each PPP participant, enhanced the understanding of this tool within Russian healthcare PPP market framework seen by the foreign company and demonstrated why and how a particular project decision is taken.

Through an in-depth review of the past and present of the Russian healthcare system, as well as PPP method evolution and its level of application and development in Russian health PPP projects, the conclusions have been made on Russian society's readiness for a qualitative shift in healthcare services provision, as well as on the citizens awareness about the impossibility to bring to life this goal without private partner's expertise and his financial resources, together with professionally prepared public entities and evolved institutional and regulatory frameworks.

This study has also managed to develop one of the financialization aspects of PPP, the project finance, to be more exact, together with its implications, thus, following one of the new and promising research directions recently proposed as such by Hodge and Greve, by showing a kind of a unique composition of SPV in terms of financial capital, or to be even more precise, a particular "double" role the bank plays in this transaction as well as importance of strong host government shoulder (Hodge and Greve 2018). Moreover, it has been demonstrated that the main principle of risk bearing as well as the principle of project's financial sustainability can not be always univocally transferred into practice especially in the healthcare sector and in particular in emerging economy country, because of different purposes of public private partnerships and the project's socially sensitive character (Brinkerhoff and Brinkerhoff 2011).

The work performed in the literature review chapter, instead, aimed at reviewing the existing literature on PPP, made it possible to achieve two goals. Firstly, it has highlighted the main issues and challenges related to the application of PPP. The second result is represented by the fact that in this way I managed to build a conceptual basis to be used in my future study on the PPP in the context of middle-income, developing countries at the example of the Russian Federation, the most advanced from the PPP point of view country.

Therefore, the main, "global", aim of my case study research consisting in verifying to what degree the results that have emerged from at times too generic, at times too specific literature, finds correspondence at the practical PPP level has been achieved. In the result of application of a theoretical (build during the literature review), economic and legal (constructed afterwards) frameworks of a PPP, as it pertains to a transnational project, to a real case study, the rationale underpinning the decision making process in such undertaking has been unveiled and critically analyzed.

CONTENTS

Introduction

The infrastructure bottleneck has always been responsible for impeding long-term growth both in advanced economies as well as developing world, even though in the latter the lack of investment is much more evident. The increasing pace of globalization with all its ensuing circumstances, together with population ageing, raising standards of life and people's wellbeing in general, condition the demand for infrastructure that is growing much faster than the availability of the resources to supply it. The large infrastructure gap between the demand and supply in developing countries together with limited budgetary resources assigned for public infrastructure services makes the idea of involvement of private investor's capital not only attractive, but unavoidable. That is why, public private partnership (PPP) has become one of the most popular and convenient tools used by policy makers to increase investment as well as to improve efficiency of the infrastructure services. The EU members are well familiar with this instrument, while CIS[2] countries, like other emerging and developing ones started to pay attention to this method of infrastructure construction and management not so long ago. PPP (*ГЧП* in Russian) has recently become one of the most pressing and discussed topics in Russia as well, that by the way, is the most PPP advanced country at the post-Soviet arena.

This topic is of particular current interest for three main reasons: first, the infrastructure bottleneck that impedes the long-term infrastructure growth in both developed and developing world countries, secondly, the precarious conditions of public budgetary sustainability caused by fiscal constraints of the majority of countries, the developing ones in particular and, finally, the novelty of the PPP paradigm for the Russian market in general, the healthcare sector, in particular.

The very first conclusion I arrived at in the result of the preliminary phase of my research, the literature review part in particular, was that there exists extremely vast literature on the PPP topic, ranging from generic overviews to narrowly focused studies on a specific, technical, aspect of PPP. In fact, another peculiarity noticed in the process of research, revealed also by other authors and, constituting one of the biggest limitations of the current literature on PPP, is its fragmentation as well as lack of systematic review of evidence and deep empirical investigation (Kivlenience and Quelin 2014; Roehrich et al. 2014). The complex and multiple nature of success factors, that cover immense number of issues from accountable government and competent private party to operational legal framework and valid financial system and which were the subject of numerous research papers, studied from different angles and perspectives, is evidenced by the almost impossibility of existence of two identical projects. Still, these issues, are said to be based on

[2] Commonwealth of Independent States

inconclusive viewpoints and findings as well as fragmented knowledge, what in its own right constitutes the gap in the existing literature (Torchia and Calabrò 2018; Chung and Meissner 2011). Scarce evidence base and empirical analysis of PPP is even more obvious when we talk about developing countries. The "paucity of studies or evaluation of PPP in developing countries" is particularly evident if put against multiple research works focused on the USA and UK, as predominant geographic areas of authors' interest, as well as Australia, Germany and Netherlands (KS et al. 2016).

The lack of studies covering a PPP project from 360° angle perspective can be justified to some extent, in the sense that it involves not only various stakeholders' participation and, thus, differing interests to be satisfied, but a number of fields of expertise or dimensions from which the project should be observed, micro-and macro-economic, financial, organizational, design, to mention just some of them. Public private partnership as a general concept of collaboration of the state with the private party is definitely not a new one. Though public private partnership as a method of infrastructure provision with the private finance involvement and typical to it contractual complexity is indeed a very young phenomenon (Hodge and Greve 2007). It is the discipline that in fact is basing on recently established legislative norms which in some countries, we can say, have passed the test of time[3], while in others, including the Russian Federation, has been recently approved and, therefore, are at their early evolutionary phase. Another factor making it very often impossible to perform an ex-post research and evaluation of a particular case project is the long-term life cycle of the PPPs, that usually comprises from 15 to 30 years, with some projects arriving at 50 years of concession.

That is why, this study aims at providing a detailed and deep description of a real case of a PPP project in healthcare sector implemented by the Italian private company in the Russian Federation. This research has an intention to contribute to the discussions on transnational PPP both from PPP model financial arrangement perspective as well as social and political components of the initiative, in one of the largest emerging economy countries and important BRICS member. The goal of this work is to provide a clear and detailed overview of PPP project in the Russian healthcare, undertaken by a foreign investor, using a single case study as an example. The paper aims to satisfy two "specular" objectives: to explore issues of the Russian market economic appeal for the foreign investor and its readiness to accommodate it as far as PPP undertakings in the healthcare sector are concerned, as well as opportunities opened up for the foreign investor together with newly arising challenges within a new PPP Russian paradigm.

[3] Keep always in mind that an absolute pioneer, the UK, has introduced the PFI in not so far away 1991.

This study has an intention to compare theoretical knowledge with a specific empirical case in order to distill some lessons on factual correspondence between the two as well as the types and areas of major divergences. It also allows to examine a broader picture, what is, in fact, instructive because not only theory and practice may differ, but also aims and results of the PPP initiative can diverge, and sometimes considerably. Moreover, considering "almost impossibility" to compare the promises of PPP performance with the final delivered result, the aim-outcome assessment might be achieved only through meticulous study of an individual project, paying particular attention to its financial structure, the thing which especial attention is paid to in this work (Lapsley 2008; Hodge and Greve 2018).

The timeless partnership notion has always attracted the governments struggling with budget deficit and private business longing for stable and secure returns. Public-private partnership mechanism can ensure the possibility of implementing socially significant projects, unattractive for traditional forms of private financing, in the shortest possible time. It provides the possibility to attract best management and technology and, consequently, to improve the quality of service to end users, thus allowing to increase the efficiency of projects thanks to participation of private businesses in them. PPP also allows to reduce the burden on the budget by attracting private funds and transferring part of the costs to users (commercialization of service provision). Thanks to private-public partnerships government agencies can focus their attention on typical for them functions as well as reduce government risks by distributing them between private partner and the authorities. Moreover, since the focus of my work is on a very particular area of all infrastructure complex, i.e. healthcare, the two following observation should be made: first, health is integral to the country's economic prosperity and, second, citizens always associate healthcare with public services and, therefore, with the government's responsibility (PwC 2018).

Recent years have seen that in order to implement a large-scale, capital intensive and socially important infrastructure facility project, not only considerable financial resources were required but transversal skills, competences and know-how coupled with acquired experience were needed. On the other hand, the world companies (in my case the focus is on the Italian one), being the subject to the growing level of competition, also due to pressures determined by the globalization process, feel the urge to expand their activity horizons and explore new markets. The foreign context can not only enable them to take advantage of competences and experience acquired at home but also to enjoy, if not higher margins, but at least stable profit flow, and on the other hand to bring a host country the so badly needed infrastructure investment as well as projects management expertise. International dimension of PPP global growth was already noted as a worthy area of further research by Hood et al. ten years ago (Hood et al. 2006). Importance of international dimension reemerged in 2018 when Yu et al. pointed to the increasing trend in

publications on transnational PPP, while in the same year Hodge and Greve presented five crucial areas of a renewed contemporary PPP research agenda, deserving future visibility, with global PPP markets, internationalization of policy on PPP and PPPs in BRICs and developing countries among them (Yu et al. 2018; Hodge and Greve 2018).

At the same time, nowadays PPP can hardly be called an emerging new paradigm of public and private partnership, it is rather an established mechanism of infrastructure and public services provision in the majority of developed nations, though with quite a number of unresolved questions, or better to say, a couple of new ones coming out every now and then. The interest on behalf of academicians to PPP phenomenon, due to considerable development of international PPP debates, is not only not diminishing with the passage of time, but is constantly increasing and so do the newly emerging aspects of the updated research agenda (Broadbent and Laughlin 1999; Hodge and Greve 2018; Rossi and Civitillo 2014). The topic of effectiveness and convenience of preferring PPP to other infrastructure procurement models, as well as PPP empirically demonstrated economic advantage over public procurement, has been put into doubt (mainly because of alleged manipulations of PSC and its further comparison with the VfM) a number of times and discussed in many papers studying both developed and developing countries (Vecchi et al. 2010; Barr 2007; Froud 2003; Pollock et al. 2002; Hodge and Greve 2007).

Despite the above said and PPP research themes' natural evolution, "a fundamental issue of the merit and worth of PPP" will remain preferred and highly contested topic for both academics and practitioners (Hodge and Greve 2018; Broadbent and Laughlin 1999). Moreover, there are researches who point to the existence of only positive coverage of PPP experience in literature due to the fact that they are mainly written by promoters of PPP such as IFI's and consulting firms (EPOS Health Management 2013). Both opponents and advocates of PPP as a method of infrastructure implementation were born at the moment PFI was introduced in Great Britain in 1992, reflecting the always existing opposition between democratic socialism and liberal capitalism. The existence of two opposing currents of economic thought on PPP, though definitely being of enormous relevance as well as substantial academic complexity, doesn't make part of my scientific endeavor in this work. It is worthwhile pointing out that representatives of both directions underline the one-sided view of PPP and its effects, because of the Government usually being the one and only source of information on such forms of cooperation between public and private partners, while other stakeholders' perspectives and implications for them have been always ignored (Wall and Connolly 2009; EPOS Health Management 2013). This probably constitutes one of the main flaws in the nowadays existing PPP literature.

After having applied all appropriate and available to me research methods and having studied PPP phenomenon from a wide range of perspectives, there came realization of the fact that

it is impossible to grasp a comprehensive picture with all its complexities without having an access to all the details that only a practical real life case can give you. As if the before mentioned difficulties encountered during the PPP research endeavor, were just a few, a further complication is presented by the unavailability of reliable sources that would provide complete data with all necessary details on the project evolution. The PPP-advanced countries such as Canada, Australia and the UK have quite exhaustive data bases of PPP projects (Storozheva 2016), what is more of an exception for the rest of the world, because countries that are at the beginning of their PPP evolutionary journey, like Russia, are only starting building such data bases, and even if they are present, they contain very synthetic information. In Italy, for example, Osservatorio Nazionale del Project Financing, managed by a number of country's economic and political institutions, provides updated tender database and periodic reports on PPP performance in Italy, as well as regulatory updates and news on promoters, even though at a quite prohibitive subscription price. Therefore, another limitation revealed during my research and underlined by authors of the recent works is the lack of in-depth studies of PPP from the viewpoint of an individual company, being part of the SPV for example, or from the private party perspective in general (Wall et al. 2009; Hodge and Greve 2018). Hodge and Greve in reviewing the contemporary research agenda lineage on PPP, found the latter quite puzzling considered an important and influential role of the large corporations (like KPMG, E&Y, Deloitte) and established firms (like Standard and Poor's) at the PPP market and their potential influence on it (Hodge and Greve 2018).

PPP has proved itself as an efficient and reliable, and often preferred, method of infrastructure facility delivery in a number of economic and social areas, with the transport construction field usually being the leader as well as pioneer as far as the number and financial volume of the projects involved. PPP is becoming a preferred infrastructure delivery option also in the healthcare sector (Jefferies et al. 2007). Though, the healthcare sector, which is the main focus of my research very often results to be underappreciated and lacking due attention. By "underappreciated" I mean that even in the World Bank PPP database healthcare projects are lumped together in one general social infrastructure projects group, making it impossible to make even some basic statistical conclusions on their number or financial volume (PwC 2018).

In the situation of lack of available complete data from the institutional entities, the only remaining possible solution for a researcher is addressing directly a private partner, that is neither easy due to high sensibility and confidential character of the involved data as well as such important and often discreet stakeholders as banks, government entities and big private construction companies. The lack of transparency of the public partner as well as private partner opaqueness in rewards and risks reporting was already noticed by Hood et al in 2006 while analyzing public and private sector disclosure systems and policies (Hood et al. 2006). Vecchi et

al. also drew our attention to the lack of data in the financial models in their research aimed at understanding whether Italian "healthcare organizations are paying too much for their PPP" (Vecchi et al. 2010). Moreover, the variables affecting the PPP project's outcome are so numerous, that the works focusing on the project's separate aspect, or some statistical data, are not suffice to make valid comparisons or to draw reliable conclusions.

The work comprises three logically connected chapters and is structured in the following way. The first chapter is dedicated to the descriptive analysis of the state-of-art literature on PPP with the aim of giving general but comprehensive overview of the PPP delivery mechanism and of identifying critical research areas and knowledge gaps as well as to prepare the conceptual basis for the further research on PPP financing tools and PPP arrangement perspectives in the context of CIS countries at the example of the Russian Federation. The second chapter considers the PPP method application worldwide, focusing on the healthcare sector in particular. There are three aspects the work is dwelling upon. These are, first, the financing alternatives, secondly, the economic and financial assessment of the project which constitutes the "economic heart" of the initiative and, finally, management and allocation of risks, one of the elements that ensures the successful conclusion of the PPP project. The third chapter is focused on application of the PPP method in Russia which is the example of a developing, a middle-income country, to be more precise, and the more evolved one in the CIS area from the PPP point of view. The last chapter is articulated in three interconnected paragraphs: one is dedicated to the examination of political, economic, legal and social frameworks the PPP tool in Russia is currently found in; the second attempts to highlight the novelty of the transnational PPP concept both in academic literature and among PPP practitioners; and finally a third paragraph describes and analyzes a real case study of a transnational PPP project in Russian healthcare sector taking into consideration all the critical aspects emerged during the previous study as described in the above chapters.

Methodological Approach

The research methodologies adopted in this work are a traditional literature review, unstructured interviews with the selected PPP project stakeholders as well surveys of professionals and experts in the PPP field (taken place within the framework of the "Russian PPP Week 2018"[4]), financial analysis, analytical description and qualitative discussion that all together found its reflection as well as logical conclusion in a case study approach. The qualitative research method reflecting naturalist epistemology and involving, among other methods, not very strictly formalized philosophical reasoning, as well as covering different fields and subject matters fits very well the inquiry on PPP, as a complex. multidisciplinary and quite new economic-social phenomenon that requires deeper and richer understanding of its intrinsic relations and complexities (Mouton and Marais, 1990; London, 1997). The empirical basis for the research is contractual, financial as well as factual data on implementation of one particular PPP healthcare project in the Russian Federation, carried out by the foreign private partner who played a role both of a general contractor and investor.

This paper undertook an inductive research through empirical enquiry employing the single case study methodology by means of collecting data, making observations and interpreting them in order to make meaningful conclusions (Hayes 2000). According to Yin, a case study is a preferred research strategy when three conditions are satisfied: the "how" and "why" questions are posed by the researcher, the investigator has little control over studied events and his focus is on contemporary, as opposed to historical, events (Yin 2003). Case study is considered to be an appropriate method when the researcher needs to understand the present dynamics of a complex social phenomenon as well as to provide holistic and meaningful description of events in real-life context, especially when there are no clearly evident boundaries between the events and the context (idem). The three main objectives of the case research, being explanatory, exploratory and description are very often overlapping and, thus, not mutually exclusive. Moreover, since it takes time, money and considerable efforts from both partners for the project to arrive successfully to its final destination, "only careful evaluation of the conditions for success and sustainability" made possible by case study helps to "assess the costs and benefits and the likelihood of success" of PPP approach (Nikolic and Maikisch 2006). The case study also allows to compare different perspectives on one and the same social-economical phenomenon and sheds light on the complexity of different experiences (Thomson 1998).

[4] Russian PPP Week is the 5th Infrastructure Congress and the largest event in Russia and the CIS countries dedicated to the issues of investment attraction for infrastructure development and realization of PPP projects, where the authorities and business community representatives look together for solutions to the issues pertaining to the development of public-private partnership.

This work followed a pluralistic approach, meaning it availed of both, descriptive and explanatory strategies of the case research. Such a pluralistic approach has been opted for in the belief that only a variety of strategies enables acquisition of combined knowledge from different sources and scientific areas, providing a multifaceted approach that fits well PPP multidisciplinary character. Moreover, context capturing is always important when people-and organization related phenomena are under study and, therefore, case study approach is considered to be an appropriate research strategy for public-private partnership, which is no longer regarded as "the next big thing" but as a "series of ongoing experiments", taking place and influenced by the context conditions (Hodge and Greve 2018; Cavaye 1996). The qualitative method, case study analysis and interviews, in particular, as demonstrated by Torchia et al., in their systematic literature review of PPP in healthcare sector, is the predominant research approach (44%), with other 41% encompassing conceptual articles and remaining 15% the empirical ones (Torchia et al. 2015).

For the purpose of the literature review the Web of Science and Scopus searching machines have been used with the "Public-private partnerships" as a key word, without limitations of years of publications, considering the relative novelty of the topic. Due to the considerable amount of literature, as well as topic's popularity, determined by its multidisciplinary character, complex nature, multiple instruments involved, and, therefore, numerous challenges that should be addressed, the literature review chapter was limited to the general, but comprehensive overview of the PPP delivery mechanism, with focusing neither on any country specificity in applying this instrument, nor on the peculiarities of its functioning in certain economic sectors. The majority of the publications found by the above mentioned searching machines included the books and books' chapters. Therefore, the centre of my attention constituted books, accompanied by the reading of the articles suggested by the references found in this already available for me material, together with the most prominent financial institutions' reports and working papers. Descriptive analyses of the pertinent publications and comparative methods have been used in order to give the state-of-the-art, the most complete possible (considering available material) picture of this infrastructure provision instrument. As a result, the undertaken review of literature on PPP as a complex and multifaceted instrument in infrastructure delivery laid the groundwork for my in-depth research and comprehensive analysis of one particular case study in healthcare sector undertaken by the Italian private company within Russian PPP framework.

I. Literature Review

1. PPP in time and space, and the definition challenge

The relationship between infrastructure and development is clear and well-established, the effects of which are perceived in multiple ways and in multiple economic areas, the relationship that has been demonstrated by many academics, as well as perceived by public and private stakeholders (Moszoro et al. 2015; Dewulf and el. 2012). Dewulf et al. in particular point out the trend of linking PPP with economic development strategy that began in the late 1990s, the trend that today is clearly observed in developing countries and emerging economies too (Dewulf et al. 2012). In this context the role of collaboration of public and private sectors for ensuring the appropriate level of infrastructure growth acquires paramount importance, with public private partnership arrangement tool occupying central position in this collaboration. The question of what favoured the PPP development and its attractiveness in the world has been addressed by numerous researches, who attempted to provide their explanations of PPP phenomenon as well as to forecast its further evolution.

Thus, Engel et al in their book affirmed that the importance and the role of PPP both in developed countries and developing world is destined to grow. It is destined to grow, according to them, both due to the inefficiencies of the public provision, i.e. the numerous flaws of the so called "white elephants" (Engel et al. 2014) (see PPP Glossary) within traditional procurement mechanism and also thanks to numerous, even though often argued about, advantages offered by the PPP mechanism. Moreover, comparing trends in PPP investments in Europe (middle-income and developed countries) with the low-income ones, they also underline almost fivefold increase in PPPs investment between the 1990s and 2005-2007, and a considerable decrease during 2009-2011, while the PPP investments in the middle-and low-income countries were just slightly affected by the 2009 financial crisis. In general, the presented in their book evidence demonstrates the growing popularity and importance of the PPP mechanism in infrastructure provision both in Europe and developing world, as well as the US.

The similar explanation of the outburst of interest towards PPPs worldwide is given by Yescombe (Yescombe 2007). He explains it by the fact that "PPPs avoid limitations on public-sector budgets", alluding to the "New Public Management", the public-sector reform movement that provides a theoretical background for PPPs, the notion I will come back later. Therefore, the budgetary benefit is the principal driver of the rapid worldwide growth of PPPs in his opinion. The influence of "NPM and market-based philosophies on public management countries" in the 1990s together with the rethinking of the government's role and privatization movement popularity in

1980s is also used by Dewulf et al. as the underlying reason for the rise of PPP (Dewulf et al. 2012).

"New public management force" is also mentioned by Grimsey and Lewis as the conclusion in their search to answer the question what lies behind the growth (in some cases "revival") of PPPs (Grimsey and Lewis 2004). Other three forces (referred to also as "the intellectual origins of PPPs") that according to them favoured and supported increased involvement of private financing in providing infrastructure related services, the PPP model in particular, include "dissatisfaction with traditional procurement methods", "development of the private financing models" and "conceptualization of "partnering" as a management process" (Idem, p.41).

Even though my research realm and academic interest does not include historical overview of the PPP phenomenon, but doing literature review I came across with various studies and observations of academicians on the importance of serious consideration of the historical perspective, that made me include also a brief summary of PPP origins.

Merna and Njirny remind that a privately financed public service existed long ago. Thus, "French canals and bridges were privately financed in the XVII century, as were the railways in the UK in the XIX century" (Merna and Njirny 2002, p.115). Talking about the origins of PPP, it is necessary to draw a clear dividing line between PPP and private finance initiative (PFI), considered to be the most "advanced" policy on PPPs worldwide (Greve and Hodge 2013. p.212). The PFI contract presents one of the forms of PPP, the DBFO form, that is why it would be a mistake to consider PFI a predecessor of the PPP (Yong 2010). Europe started to apply PPP in the late 1980s together with the pioneering Great Britain (with Australia joining the trend almost simultaneously), whereas in the USA this instrument was adopted already in the late 1970, and in 1990s the PPP established itself in the world as "key tool of public policy" (Dewulf et al. 2012; Osborne 2000).

Hodge and Greve who besides raising a challenge of finding an adequate PPP definition for empirical studies pointed out to the challenge to see PPP in the historical perspective, since PPP, as they claim, may not be such a new phenomenon (Hodge and Greve 2005). That is why knowing how it has evolved could help us to understand how it should be managed now and in the future (Idem, p.16). Also Wettenhall, giving the outline of the historic perspective of the PPP, warns us that taking PPP "as a new social movement without antecedents" we might lose the benefits derived from the understanding of strengths and weaknesses of old partnering arrangements (Idem, p.23). After having described different forms of partnering arrangements in retrospect and demonstrating that the elements of public-private mixing have existed in different countries and different stages of their development with clear positive outcomes, he concludes it

to be deeply incorrect to regard these arrangements the product of the recent reforms. Della Croce and Gatti giving an overview of international trends in infrastructure finance in both developed and developing countries, make also a casual remark on the history of the infrastructure debt, i.e. the project finance debt, the integral component of the nowadays PPP procedure (in ed. Caselli et al. 2015).

The increasing use of PPP in recent decades favored by the above said circumstances and its worldwide diffusion at the same time has spawned the proliferation of definitions to the point of creating a real challenge which in its turn originated multiple debates among researches and practitioners. Generally speaking, the term of PPP is used to describe a wide variety of working arrangements established between private and public actors. Several attempts have been made to give a better possible definition for a PPP, but there is still no single widely accepted one in the literature or official documents used unambiguously by the academicians and policy makers. Very often it is referred to as "a blurred concept with several meanings" (Vecchi et al. 2015). Hodge and Greve whose book had as one of the objective to review and re-examine a huge number of definitions and meanings of PPP in order to find the one that suits better for empirical studies, consider the finding of an adequate definition of PPP to be one of the challenges presented by PPP to governance and public management scholars (Hodge and Greve 2005). Bovaird refers to PPP as a "marriage for money" since very often they are characterized by a financial scope (Bovaird 2004). Khanom introduces PPP as a tool to foster development (Khanom 2010). Even though the use of private sector capital for financing of public infrastructure is not a new phenomenon, Yescombe considers PPPs as "a modern way of facilitating private provision to help meeting an increased demand for public infrastructure" (Yescombe 2007).

Moreover, in my opinion, considering the impact of time the PPP is subject to and the complexity of the PPP itself, it will continue to change and evolve. Therefore, it is not surprising that policy makers and academicians can not find an agreement on the unique content of the PPP concept, despite its world-wide diffusion and application. In order not to load too much this section, I decided to put the most worthwhile definitions I managed to find and analyse in the Annex 7 (PPP definitions glossary), where together with the definitions given by the researches and academics, there are also those given by the authoritative international and national competent institutions in order to give a complete picture of though controversial issue of defining PPP.

What I have observed analyzing the wide range of definitions is that they are usually "adapted" by different authors in line with the specific area of their research, objectives to be achieved and other determinants, even though the gist changes only slightly. For instance, Evans and Bowman studying the importance of "getting the contract right" and claiming that the contract is fundamental for PPP success, as well as determining for the achievement of satisfactory

performance level of all the contracting partners, underline the "contractual nature of the relationship between the public and private sectors", as well as significant capital funding requirement" while defining PPP (in ed. by Hodge and Greve 2005, p.62). Hodge and Greve go even further in defining PPP and underline the peculiarities (or defects) of the contractual arrangement, telling that besides the classical risk sharing and long term commitment, "uncertainty of the future should be taken into account and the knowledge that not everything can be written into a detailed contract" (Hodge and Greve 2005; Williamson 1985).

The same authors but in the book published a bit later studying the "turbulent times" in the aftermath of the financial crisis and its effect on PPP, draw our attention to several crucial concepts, all united under the PPP umbrella, and in addition to well-known and commonly agreed upon PPP typical features of risk sharing and long-term contracting, introduce another key concept into a PPP definition, that of "innovation", or "new solutions", as well as "common purpose" achieved in the result of public-private collaboration (Hodge and Greve 2013, p.2). The "purpose" issue, even though not "common" finds it reflection also in the OECD definition of PPP where the alignment of the government service delivery objectives (though differing from that of the private sector) with the private partner profit objectives is emphasised (OECD 2008, p.21). In general, not all approve of using the word "partnership" defining PPP, arguing that partners usually have the same objectives, the thing cannot be said in case of PPP about the private and public partners, where the former is looking for the economic profit, while the latter is interested in delivering the public service in the most efficient and convenient way.

Another observed peculiarity of the PPP definitions is that despite the absence of consensus on it, there is quite typical differentiation in PPP literature between the narrow and broad interpretation of PPP. For example, the narrow one, suggested by Campbell for whom a PPP project "involves the design, construction, financing and maintenance (and in some cases operation) of public infrastructure or public facility by the private sector under a long-term contract" (Campbell 2001). Whereas a wider interpretation "keeps the organizational aspect but sees it in inter-organizational terms, is to conceive policy network as special arrangement for public-private cooperation" (Greve and Hodge, 2005, p.5) (For other "broader" PPP definitions see Annex 7).

Always Greve and Hodge also point out to PPP used just as a "catchy title" or a "renewed buzz word" warning us that in reality there can be nothing new underneath the PPP expression (Greve and Hodge 2005, p.7). This could be explained by the fact that since it has become recently a favourite expression used to describe new institutional arrangements for government (example of Blair government in GB), especially when it decides to follow a completely new policy direction

and when it is concerned with potential attacks or criticisms based on its previous poor policy results.

Another similar division between researches concerning numerous and often ambiguous definitions of PPP could be found in understanding PPP either as a tool of governance or as "a language game" (Teisman and Klijn 2002). According to Linder "the language of PPPs is a game designed to cloud other strategies and purposes" (Linder 1999). And one of such purposes is privatization, since privatization as well as contracting out generate opposition, while "alternative delivery systems" and "PPP" are more attractive and inviting to join the debate (Savas, 2000). Thus three authors (Teisman and Klijn, 2002; Linde 1999; and Savas 2000) even though from different perspectives, but all suggest "the term PPP to be seen in relation to previous more pejorative terms such as contracting-out and privatization" (Idem, p.7).

There are also those who underline the governance component in the PPP definition. Thus, Klijn and Teisman judging by the international evidence on the growing popularity and interest in PPP concluded that PPP has become "one of the most important new horizontal forms of governance in the modern network society" (in ed. by Hodge and Greve 2005, p.95). Dewulf et al. also call for understanding PPP as a special feature of governance rather than just government, what will allow us to focus on the process or functions of governing rather than on its institutions and what also emphasises the involvement and important role of multiple actors in PPP. PPP is not a goal, but a method to achieve certain objectives, the authors add (Dewulf et al. 2012, p.1).

Finally, repeating the observation I made at the beginning of this chapter, PPP being quite a novel and multifaceted phenomenon continues to evolve and with it the PPP definition is in continuous evolution and modification. Thus, one of the resent "additions" to the PPP definitions, that I observed has been the inclusion of the ethical dimension or social value benefits. Osborne (see Annex 7) defining PPP, talks also about the mechanism that promotes and brings benefits to the development of "socially inclusive communities", thus underlining the social aspect and societal contribution of PPP (Osborne 2000, p.1). Finally, Stadtler in his paper where he proposed a new evaluation approach for a particular type of PPP, that is PPP for development (see Annex 7), defining PPP mentions "a societal concern", "civil society" and "underprivileged community groups" (Stadtler 2016, p.73). Yseult defines PPP as "means of allocating resources among various categories of individuals", and proposes "the community-analogue" model based at the ethic of care for assessing the public authority discretion towards its citizens (Yseult 2014, p.152).

Despite various "technicalities", "broader" and "narrower" senses implied by the PPP, the idea that runs all through all the PPP definitions is that it is a method of government procurement that differs considerably from the traditional procurement, because public authorities buy infrastructure provided desired service, not just a building, thus there is separation of services from

the underlying assets The central idea is that PPP is about service procurement, not about the assets, has been widely accepted and agreed upon (Urio 2010; OECD book; Grimsey and Lewis 2004; Grimsey and Lewis, 2005).

Despite the vast variety of PPP definitions found in literature and used by academicians and practitioners, all of them agree on the fact that it is a partnership of public and private sectors that involves usually a long term contract that provides for risk sharing between participating parties (one of the big incentives for both sectors). What unites all the definitions is the emphasis on the benefit for both sides (Dewulf et al. 2012; Hodge and Greve 2005). The emergence of some new products in the result of this beneficial partnership is pointed out by Hodge and Greve (Hodge and Greve 2005). Whereas Schwartz et al. in their book that in great part deals with fiscal and macroeconomic risks the PPPs imply for the government budget and its fiscal sustainability, outline only three features that unite all PPP definitions in their opinion (Schwartz et al. 2008). These are private execution and financing of public investment, an emphasis on both investment and service provision by the private sector and risk transfer from the government to the private sector.

Speaking about the PPP phenomenon, the innovative approach introduced by Hodge and Greve should be absolutely mentioned (Hodge and Greve 2005). Their conceptual model of the PPP includes a variety of forms, levels, shapes and sizes. The form refers to the type of contractual arrangement depending on the subject the public party enters into contract with. Whereas with the levels the reference is made to various combinations of local or regional government with private sector or public companies or international organizations or multinational associations. Finally, the authors talk about different dimensions of the PPP phenomenon, because PPP is more than just a project or activity – there are 5 dimensions the PPP can assume. They include: 1) project or activity level, 2) management tool or project delivery tool or organizational form, 3) policy preference, a statement as to the role of the government role in the economy/symbol of private sector role in economy, 4) governance tool or style, 5) historical context and culture. Thus, at the narrowest side of the lenses PPP is viewed as a project – at its broadest end it is viewed as existing within a broader historical and cultural context. For the abovementioned reasons each partnership, each project is different according to the place it occupies at each dimension of this conceptual model.

Considering the non-remoteness of the financial crisis that seriously perturbed the habitual state of affairs in the world, especially at the economic arena, the topic of the effects of post-financial crisis and subsequent changing trends in financing of infrastructure in general, as well as trends in PPP investments in particular could not but draw attention of the researches and occupy its due place in the PPP literature.

Thus, Greve and Hodge studying the effects of post-financial crisis turbulent times, as well as changing trends in PPP investments, affirm that the financial crisis of 2008 has seriously questioned and prejudiced the superiority and efficiency of market, while the need for the broader role of government in society has reemerged again (Greve and Hodge 2013). From a business perspective, the authors mention the tendency of finance to move from traditional banks towards state support and development banks, including the European Investment Bank, as well as the tendency of the deals to move from Europe towards Asia Pacific. The authors also suggest a couple of strategies that the governments, private sector companies and countries in general, might want to pursue in future as far as PPP is concerned, as well as two possible scenarios the PPP development will take after the effects of the GCF.

Moszoro et al. in the chapter where they focus on EMDEs (emerging markets and developing countries) and these countries' general vulnerable situation as well as their considerable difficulties in raising funds and investments for infrastructure due to weak and instable economic, institutional and financial conditions also underline the devastating effect of the economic crisis (in ed. by Caselli et al. 2015). The already nor very favorable situation was subsequently aggravated by the global financial crisis effects, making all the countries' government budget, which has always been a traditional source of infrastructure finance, tighten even further. All this considering that the volume of PPI in financing infrastructure projects was already quite modest with respect to OECD countries (the corresponding data on the volumes of PPI is provided by the authors, p.19).

Della Croce and Gatti in their turn are providing an overview of international trends in infrastructure finance, both on the market for infrastructure debt and on the market for infrastructure equity (in ed. by Caselli et al. 2015). Thus they point out to the remained trend of financial investors' preferences for brownfield over greenfield projects (see PPP Glossary) the former being less risky. Consequently, the overall trend of limited "pure greenfield infrastructure funds fundraising" is still pervasive all over the world: 11% VS 60% (Idem, p.92). What concerns the infrastructure debt market, since the project finance is used worldwide for both brownfield and greenfield projects, the authors underline slight differences in undertaking the former or the latter type of project depending on the country's development level. Thus, the emerging markets still use this technique for economic infrastructure (energy and power, oil and gas, transportation and telecoms), while the developed economies have adopted this tool majorly for financing social infrastructure.

They also demonstrated that with the evolution of the capital markets, the new financial tools able to attract a larger amount of funds appeared. As concerns the recent transformations on the market for infrastructure equity, the most significant and the most evident change has been

observed in the area of subjects of investment. There has been a shift from industrial sponsors typical in the mid-2000s to the institutional ones. Among the initiatives undertaken recently in the equity market for infrastructure the authors mention two: the foundation of co-investment vehicle and government or development institution involvement. The first initiative has its origins in the so called governance gap and always rising dissatisfaction regarding the asset manager (infrastructure fund) – asset owner (pension fund) relationship, what makes the investors choose to build in-house expertise and to strengthen their internal capabilities in order to avoid the cost of resorting to fund managers (Idem, p.96).

Although according to Clark et al. who in their paper also study new trends in infrastructure investment and speak about re-conceptualization of intermediation, conclude that despite the obvious future potential of direct investors for the infrastructure investing, the fund managers "will still have a crucial role to play in market development" (Clark et al. 2012, p.105). The latter is explained by the fact that it is usually too burdensome for the institutions to keep in-house investment teams in terms of people, process and politics (Idem. p.110). Moreover, the authors assert that the future is very likely to see the "hybrid model" of infrastructure investing where "third-party fund managers will partner with and guide direct investors into infrastructure deals" (Idem, p.111).

One more recent initiative in the debt market for infrastructure, instead, as reported by Della Croce and Gatti, has been the "originate-to distribute model" in which banks try to cooperate with institutional investors in order to channel debt funds to infrastructure. The use of project bonds, as the part of total debt committed to infrastructure finance, as demonstrated by the authors, because of some of their features, is quite limited, with clear concentration on certain sectors (infrastructure, power and social infrastructure), as well as on certain geographical areas (US, Canada, UK and Western Europe) (in ed.by Caselli et al., p.90).

2. Rethinking the boundaries between public and private

Even though it is widely agreed among the PPP researches and policy-makers that the borders between PPP, privatization and public procurement are not very well delimitated because much depends on how the risk is shared and also how privatization is defined, it is important to distinguish these 3 modes. Dewulf, et al. talk about "blurring boundaries" (Dewulf et al. 2012, p.1). According to Grimsey and Lewis the PPPs "...fill a space…" or occupy the middle position between "two poles –purely private activity and traditional public funding…. with each position representing a slightly different mix between the public and private sectors" (Grimsey and Lewis 2004, p. 54). Wettenhall as many others, places PPP "between the hard-line positions occupied by nationalization at the left pole and privatization at the right pole of the public-private spectrum", thus, occupying the virtuous middle-ground position between the two (in ed. by Hodge and Greve 2005, p.22).

It is even more important to distinguish between PPP and privatization, the ungrounded confusion between which very often triggers criticism raised against the PPP, especially in the countries with strong aversion to privatization and private sector (Grimsey and Lewis 2007). The confusion can be called ungrounded because those who "confuse" PPP with privatization ignore strong involvement of the government in setting PPP's objectives, as well as its attentive supervision of the PPP operation. The authors also disprove in a very convincing and decisive way the two accusations very often raised against PPP: first, that PPP is "privatization through the back door" and, second that PPP through private sector participation "will dilute accountability and erode public interest" (Idem, p.248). Dewulf et al. also very ably and concisely distinguish PPP and privatization using just one word: PPP shares costs, revenues and responsibilities with the private sector, while privatization transfers task, responsibilities, cost and revenues to the private hands (Dewulf et al. 2012).

After having examined attentively the available literature on the PPP and boundaries with other infrastructure services delivery modes, I found it reasonable to build a table that would encompass the issues most frequently dealt with by the scholars and practitioners, and that would give a complete picture of the problem under discussion in a concise and logical way. I classified these issues into 4 categories, each of them reflecting the factors to be considered when deciding which delivery mode to opt for. These categories are: PPP infrastructure (in)/appropriateness, PPP advantages, PPP weaknesses/reasons for PPP failure and political-economical reasons for the government involvement in PPP. Thus, according to Engel et al. (see Table 1, column A) the choice partially depends on "technical and economic characteristics of the infrastructure", with the examples provided in the table (Engel et al. 2014). For instance, the perfect PPP compatibility with

the highways according to the authors lies in the fact that PPP provides high standard routine maintenance, thus guaranteeing high standard road quality, the thing public provision lacks, while the inappropriateness for schools and hospitals is explained by the difficulty to set performance standard for this kind of infrastructure. Grimsey and Lewis are also of the opinion that transport projects are very often executed by means of BOT (PPP), as well as by means of contracts, although giving another reason for this preference – the weak regulatory framework (Grimsey and Lewis 2007). On the contrary, PPP is less adapt in the information technology field, according to them because of "the complexity of the business processes involved, the fast pace of technological change, and the often low level of operational content" (Idem, p.93). The inappropriateness of the IT sector is also confirmed by the OECD book, referring to the risk of technological redundancy and the difficulty in deciding who should bear the risk, as the main reasons for its inappropriateness (OECD 2008).

Schwartz et al. don't focus on any specific economic sector, but instead speak about the economic infrastructure in general as a better candidate for PPP compared to the social infrastructure (Schwartz et al. 2008). They explain it by the attractiveness of higher rates of return (more typical for the economic infrastructure) for the private sector, user charges feasibility and desirability (always in the economic infrastructure), and finally because of the better developed market for bundling (see PPP Glossary) in economic infrastructure projects rather than in social ones (Idem, p.87). Grimsey and Lewis even identified three criteria basing on which it can be decided whether the service is better to deliver by means of PPP or by other procurement method (Grimsey and Lewis 2004). The criteria are nothing else but the answers to three questions that could be synthesized as "core services", "value for money" and "public interest" (Idem, p.94). The main conclusions, supported by the examples, are that, first, there is no evidence of any public services to be core, meaning that the government should personally deliver this service. Second, even if the general public is of opinion that certain areas should remain under public provision control, it is unreasonable not to allow the private sector to design and deliver some auxiliary services or infrastructure supporting operations.

Passing to the two next categories (PPP advantages and PPP weaknesses), I want to denote those strong points of PPP that have been stressed by more than one author and which particularly reflect PPP specificity. Engel et al., Schwartz et al. and Hellowel speak about important efficiency gains generated by various factors, such as competitive market and financial market strict rules (Engel et al. 2014; Schwartz et al. 2008; Hellowel 2015). Though the most outstanding reason contributing to the PPP efficiency potential is the bundling advantage, another strong point mentioned by the above said authors, as well as by Grimsey and Lewis who also call it "an integration feature" and underline its advantageous effect - "highly effective operational phase" -

to be more exact, also for the government (Grimsey and Lewis 2007, p.107). Bundling permits the private party to minimize life-cycle costs of the project by internalizing life-cycle costs during the building phase without compromising its quality. Bundling gives opportunity to ensure future project revenues that would back current debt (and equity) investments by means of "exploiting within-project economies" (Greco 2003, p.137).

Another merit following from the integration feature (or bundling) is PPP's cost and funding predictability over the whole life of the project, mentioned by Grimsey and Lewis, or as it is referred to by Hellowel, greater time and cost certainty (Grimsey and Lewis 2007; Hellowel 2015). The private sector has always been known for its innovative and survival capacities, as well goal-oriented approach. Thus, Grimsey and Lewis notes appealing private sector's "can-do mentality" that by means of PPP can be transmitted to the public partner (Grimsey and Lewis 2007). Schwartz et al. speak about "the possibility to harness the power of private sector management and innovation" (Schwartz et al. 2008). Finally, Coghil and Woodward mention the possibility of a useful advice for the public authorities from the private actor, of a clearly neo-liberal nature (Coghil and Woodward 2005). The last two PPP advantages, being appealing for the public administration from the point of view of potentially new skills and abilities, also constitute the reasons for the government involvement in PPP (the fourth column in the table).

Among one of the widely recognized in the literature and commonly agreed upon among practitioners weaknesses of PPP is its irregular and incorrect use on the behalf of the government, that apply this instrument not to improve service provision efficiency, and therefore value for money (see PPP Glossary), but simply to circumvent public spending controls made feasible thanks to the possibility to record the PPP investments off the balance sheet. Thus, Engel et al. speak about "a useful accounting trick", performed by the governments in order "to make public investment while keeping future obligations off the balance sheet and beyond legislative control" or to anticipate government infrastructure spending, what can be particularly useful on the threshold of reelection campaign (Engel et al. 2014). Hellowel refers to this false PPP advantage as the misuse of PPP to defer the perception of expenses, what, in its turn, only aggravates the quality of investment decisions (Hellowel 2015). As a consequence, an often positively advertised strong argument in favor of PPP of budget relief is put in doubt. For this very reason Engel et al. make a very relevant conclusion, proposing to treat PPPs as conventional government investment and consider it as normal public debt (Engel et al. 2014), the advice which apparently hasn't been heard by the government administrations so far.

Another drawback of the PPP, underlined by a number of authors and known by many policy-makers is its high cost. High costs that come both from the intrinsic complexity of the PPP instrument and, consequently high contracting and transaction costs, as well as higher private

sector (compared to the government) borrowing cost, makes PPP particularly inappropriate for small projects and explains its exclusive application in large high-investment ones. (Engel et al 2014; Grimsey and Lewis 2007; Schwartz et al. 2008; Rothballer and Gerbert 2015).

The PPP shortcomings have also been studied from the cause-effect perspective. Thus, Engel et al., performing the country studies, arrived at the conclusion that the PPP shortcomings, are similar across the countries and result from 3 main factors (see Table 1, column C) and that it is easier to implement PPP from the scratch in the countries that only begin to use it, rather than in the countries with well-established PPP mechanisms (Engel et al. 2014, p.148). Whereas adequate project preparation and "PPP preparation gap" is considered to be one of the reasons for the PPP failure by many authors (Rothballer and Gerbert 2015, p.76, Delmon 2011). Former authors distinguish also between project life-cycle related issues and "the enabling environment" among the reasons for PPP failure, in such a way allowing for certain circumstances that could partially exonerate the private party from the responsibility of having suffered a failure (idem).

Coghil and Woodward focusing more on political issues of PPP, also draw our attention on the PPP "imperfectness" (Coghil and Woodward 2005). Raising criticisms against PPP, using as the supporting base for these criticisms the reference to some demonstrated flaws of the neo-liberal paradigm and fallacy of its underlying assumptions, the authors mention some challenges - potential drawbacks of PPP. For instance, the corruption problem (due to discretionality of political decisions) and the concern that superior technical efficiency the PPP usually is associated with should not displace other social values, such as equity, democracy and accountability are raised. They also point to the fact that public debt is not always a danger defending in such a way the traditional public procurement with direct government funding infrastructure projects.

Finally, talking about the political-economic reasons for the government involvement in PPP, they partially overlap with the PPP advantages, the thing I find very logical and reasonable and I noticed considerable degree of concordance in the literature on what allures the governments into public private partnering. Thus, for Yescombe the main reason for government addressing the private party for collaboration is the budget relief possibility, though this presumable advantage very often turns out to be a fiscal trap (Yescombe 2007). Other motives incentivizing government to recourse to PPP include the always growing infrastructure gap, a general mind shift from asset acquisition towards service delivery, as well as shift from direct government service delivery towards government's fostering role in the service provision, and finally, "the objective of achieving better VfM" (OECD 2008; Rothballer and Gerbert 2015; Linder and Rosenau 2002; Grimsey and Lewis 2007; IMF 2004).

3. Understanding PPP: key elements and project finance principles

In the endeavor to draw an all-encompassing picture of PPP, I examined available literature in pursuit of its distinctive features through three lenses: PPP's key elements, its success factors, as well as the challenge of defining and measuring PPP success in general, and finally, risk allocation, involving the basic risk classification. All the key elements referred to in the literature I examined are compactly reported in the Table 2 "PPP distinctive features". Here I will only mention and analyze the most outstanding characteristic features that emphasize the PPP's peculiarity and distinguish it from other infrastructure delivery methods.

Thus, the OECD book points out the specific nature of the service usually delivered by the government through PPP contracts (OECD 2008). This specificity finds its expression in 3 PPP traits: the general interest goods, complexity of services and contracts, and, third, contractual flexibility and renegotiation. Flexibility is also underlined by Grimsey and Lewis as PPP distinctive feature, but it is disclosed in a broader way (Grimsey and Lewis 2007). The flexibility is understood from 5 different angles: first, a great amount of various partnership arrangements (concessions, leasing, BOT, DBFO, etc. [5]), second, PPP's utility in a number of "infrastructure categories" (hard, soft, economic, social (see PPP Glossary), third, PPP's applicability and actual operation in diverse countries, fourth, the presence of two potential sources of revenues (user charges and public sector fees) and fifth, its ability to take care of future new demands and requirements. The authors also very ably noticed the simplicity of the incentive-cantered theory the PPP is based on, the element mentioned by almost all other authors and usually referred to as the ability to shift risks and responsibilities to the party best equipped to shoulder them.

Finally, Engel et al. in their paper underline a considerable number of various agents involved in PPP and consequently a large number of contracts regulating relationships between them, what certainly finds its reflection in PPP intrinsic complexity, the characteristic pointed to by other authors (Engel et al. 2009). What Engel et al. draw our attention to is a "potential source of conflict which may endanger debt holders", arising from this variety of actors and contracts, as well as to the fundamental role of the SPV and procuring authority (usually the government institution) (Idem, p.46). Underlying the fundamental role of these two PPP's actors, they do not mean to underestimate the role of other agents, debt holders, for instance, who play crucial role in screening and supervising various factors of the PPP project before formally undertaking it.

Passing to the second "lens", (focused on success component) I used to examine the PPP,

[5] See Annex 8

it should be noted that there is still not much agreement on the PPP success definition, what seems to be consistent with its multifaceted character and intrinsic complexity and also taking into account absence of unambiguous PPP definition as such. For this very reason here I will focus on the problem of PPP success definition, as well as its measuring, as seen by different authors. I would not dwell upon at any success factor in particular, since the concise list of those identified by me and taken from various sources can be found in Annex 2.

The problem of defining PPP success and measuring of it has been the concern of many policy-makers and PPP researches. Greve and Hodge among many other questions they put to themselves in the book raise a question of "how to measure success of PPP?" or "what constitutes success for PPP?" dedicating the whole chapter to exploring of the success notion (Greve and Hodge 2013). What they propose is to use their innovative 5-levels conceptual model (already explained in the Definition section) and to judge the success of the project at each of the five levels. They acknowledge that the project level represents the easiest and the most attractive in terms of "certainty and visibility and its appeal to a common-sense judgment" way of success evaluation, because it is based on the comparison of the achieved results with the previously agreed contracted standards (Idem, p.6). They also recognize this approach to be too narrow though, because the reasons for a PPP adoption are really multiple, especially taking into account the large variety of stakeholders involved into PPP and each pursuing its own objective.

Though, problem that comes even before the problem of success measuring is how to define the PPP success. The first challenge mentioned by the authors is the continuously changing objectives especially in the context of "turbulent times" in the aftermath of the GFC (global financial crisis). The second one lies in the ambiguity of determining the PPP success: is delivering projects on time is preferred over encouraging a more innovative public sector or vice versa?

Stadtler in his work where he proposed a new broad evaluation stake-holder approach (for PPP for development) identified also numerous challenges involved in the attempts to find the right PPP assessment method (Stadtler 2016). One of such challenges was that of different definitions and understanding of success by partners and stakeholders differently, what, in its turn, led the author to pose another unsolved question: "Does a PPP have to provide unique benefits for all its partners in order to be deemed a success?" (Idem, p.84). An important contribution into assessing the PPP success on the government behalf has also been made by McConnell, who proposed a three-dimensional framework for policy success evaluation in order to have a broad perspective of PPP success (McConnell 2010). His framework ensured that the idea of success encompasses three important domains – the process, programmes and politics, and not only technical matters, such as value for money. The OECD book proposes to use both the performance

measurement (through special indicators) and user satisfaction measurement in order to evaluate success of delivering public services through PPP implementation (OECD book 2008).

Rothballer and Gerbert as well as Liu et al. in their works have examined key success factors but studied from two different perspectives (Rothballer and Gerbert 2015; Liu et al. 2014). Rothballer and Gerbert after having summarized the findings on the key success factors for PPP project preparation developed by the World Economic Forum proposed their own PPP whole-life best practice framework towards success, taking into account three PPP phases (Origination, Preparation and Implementation) (Idem, p.60). Whereas Liu et al. identified the critical success factors for PPP (CSF) for each of the three determined by them phases of the PPP project cycle (see Table 2, column B), using the project management success logic framework, the perspective, that according to them "received limited attention in the literature and case studies" (Liu et al. 2014, p.1). They consider their framework ideal, because, first, it has demonstrated the importance of process management for the PPP project success, the detail that has been often ignored, as well as its potential to be used as the communication tool and therefore to improve the stakeholder satisfaction, crucial for the overall success of the project.

The last perspective from I chose to look at PPP is taking into account the feature that distinguishes this delivery method from others in the most substantial way, that is, risk allocation, or risk transfer. There is still much discord on this issue at the national level and no unanimity at the international one, even though this problem has always been the subject of attention of the European community regulators. According to the recommendations of the Statistical Office of the European Communities (Eurostat, 2004), that is responsible for taking decisions on how the contracts signed between government units with the private ones should be treated in national accounts, the cost of assets involved in PPP can be classified as non-government assets and therefore considered off-balance only in case when besides construction risks, either availability or demand risk is transferred to the private party. This recommendation is quite often questioned by the academics, who provide their reasoning, contesting its fairness and correctness, as well as their recommendations.

Thus, Grimsey and Lewis in their paper express disagreement with and criticize the Eurostat prerequisites for PPP to be classified on/off balance, because according to them this classification fosters moral hazard and incentivizes to design PPP in a way enabling only to pass the Eurostat test (and record it off budget) but not to achieve the best VfM, i.e. to allocate risks in the most efficient way (Grimsey and Lewis 2005). They also point to the absence of universal accounting and reporting standards for PPP, resulting in PPP use, very often justified only by the wrong motivation to circumvent fiscal and budget controls.

Whereas, Engel et al. in their book examining the general principle of risk-allocation, put forward the idea of transferring to the concessionaire the risks it can control (construction, operation and maintenance risks for example), as well as some nonspecific government-induced risks (for example devaluation), born also by all other local firms. It would have been more sensible to make the SPV bear the availability risk (see PPP Glossary) (Engel et al. 2014). Whereas, exogenous risks, such as the demand risk, on the contrary, should be transferred to the public agency, or the society. The usefulness for the demand risk being transferred to the government is demonstrated by the authors in their paper with quite a simple model (Engel et al. 2009).

As it has been demonstrated the issue of risk transfer is of paramount importance for differentiating PPP from the traditional procurement. It is also known that the main attractiveness of PPP mechanism is guaranteeing the overall efficiency of the project. The possibility to transfer risk to the private partner is the main prerequisite for achieving efficiency, because, as it is reminded in the OECD book, simply participation of the private sector partner in the project is not enough to ensure improvements in service delivery (OECD 2008, p.48). That is why from the ability of the public and private actors to identify, analyse and allocate risk in the appropriate way the achievement of one of the primary goals of PPP - VfM improvement - will depend. It is widely agreed that the risk should be allocated to the party who is best able to manage it. It does not necessarily mean that this party should be the private one, though.

The authors clarify the concept of "the party best able to manage the risk" by quoting Corner (2006, p. 46)[6] and Leiringer (2006, p. 306)[7]. The task of identifying, analyzing and finally allocating the risk is particularly difficult and complex in case of PPP, given the complexity of the large infrastructure they involve. Risk profiling and its successive allocation should also distinguish between exogenous and endogenous risks (risks that cannot be controlled). Certain risks (political risk) can be better managed by the public sector, while others are better fitted to the private sector management. Attention should also be paid to differentiating between commercial risks (see Table 2, column C) usually better suited for the private sector and legal and political risks, managed better by the public sector. Grimsey and Lewis also affirm that allocation of risks within PPP differs from the traditional procurement methods, because PPP focuses on the purchase of infrastructure based services, not the assets themselves (Grimsey and Lewis 2007). They also remind that it is very costly and very disadvantageous to load the private party with various risks,

[6] "...to best manage risk means to manage it at least cost and thereby reduce the long-term cost of the project"

[7] He raised the question "whether the party best able to manage the risk is the party that has the largest influence on the probability of an adverse occurrence happening or the party that can best deal with the consequence after an adverse occurrence".

because it will not bear them cheaply, but will add a significant premium. This issue is also dealt with by Delmon (Delmon 2011).

Engel et al. 2009 make further distinction of project risk associated with demand assumed by the SPVs (see Table 2, column C, point 7) (Engel et al. 2009). The project failure risk is claimed by authors to be correctly assigned to creditors being the market test of the project's quality. While the one related to the adverse market conditions can be reduced by availability payments contracts (see PPP Glossary), allowing the contractor to reimburse the investments into the "cold works" (see PPP Glossary).

After risk have been identified and analyzed, their pricing should take place. IMF highlights that the public and private sectors use different market risk pricing methodologies. Both partners should also know various tools of risk mitigation in order to manage risks: contractual arrangements, insurance, export credit agency guarantees, political risk insurance, financial derivatives. In practice risk sharing is quite a challenging task, especially because of the distinction made between legal and economic ownership in contract that do not reflect the actual risk-sharing arrangements between private and public sectors (IMF, 2004**).**

In this chapter I also give a concise overview of the most widespread method of financing infrastructure investments in developed countries (and not only) with the participation of the private party, the instrument that constitutes the basis of the PPP, that is project finance. The project finance, also as PPP, dealt with in the previous subchapters, neither has "precise legal definition" (Merna and Njiru, 2002). Since project finance, as underlined by Merna and Njiru, is not a new tool in general, even though its gradual evolution and subsequent increased importance as the financing technique opened new opportunities of funding of the projects with no previous history, its functioning mechanisms are well-known to the financial practitioners and widely covered in the literature (Idem, p.2; Yescombe 2002; Gatti 2013). I also created the scheme of a typical project finance structure with its key elements based on various sources of project finance organization, as well as acquired knowledge and understanding of this financial mechanism in the process of preparing the work (see Annex 4).

Among financing mechanisms available for infrastructure projects, and for PPP projects in particular, the government funding, corporate/on-balance sheet finance and project finance are the three most well-known and widely used instruments, mentioned in the World Bank paper. The first mechanism, basically consisting in government funding all the infrastructure capital investments, has been recently more often recognized to be "outdated" and inappropriate considering growing budget constraints and financial difficulties of both industrially developed and developing countries. Moreover, the governments themselves have also come to the understanding that the private party is much better equipped to take care of many aspects of the

project and is better prepared and incentivized to bear some risks. The corporate or on-balance sheet finance is said to be less complicated as compared with the project finance, as well as less expensive, being the cost of funding of the private operator. However, it has one relevant disadvantage - the opportunity cost attached to it. Finally, the project finance is called to be one of the most common and most efficient financing arrangements for PPP projects (WB, p.2).

As affirmed by both Esty and Gatti it is the project financing that is "the most widespread financial technique the financial markets have developed for the participation of private capital to unlisted infrastructure" (Esty 2004; Gatti 2012 p.84). Project finance, defined as a method of raising long-term debt financing for major projects through "financial engineering", based on lending against the cash flow generated by the project alone, is also known as "limited recourse" or "non-recourse" financing, meaning that lenders, both debt and equity have no recourse to the general funds or assets of the sponsors of the project or shareholder's assets (Yescombe 2002, p. 340; Delmon 2011, p.227, 72; Merna and Njiru 2002). Project finance depends on a detailed evaluation of a project's construction, operating and revenue risks, and their allocation between investors, lenders, and other parties through contractual and other arrangements (Yescombe 2002). At the same time the previous liabilities of the sponsor do not reduce the credit rights of the lenders. The lenders rely on the project's cash flows and collateral security over the project's assets as the only means to repay debt service. The extent to which some recourse to shareholder assets is provided is commonly called "sponsor support", which may include contingent equity or subordinated debt commitments to cover construction or other price overruns (Delmon 2011, p.72). Project finance is the transaction of structured finance of a highly leveraged nature, or highly geared instrument, characterized by high debt/equity ratio.

Grimsey and Lewis while describing some "innovative financing techniques" with the help of which it is possible "to ameliorate" or to lower some of the infrastructure risks, include the structured project finance and credit from specialized financial institutions among these innovative instruments (Grimsey and Lewis 2007). Two criteria of a project's suitability for financing are indicated by them: first, the ability of a project company to stand alone as a distinct legal and economic entity, and, second, non-recourse or limited-recourse arrangements that separate project assets, project-related contracts, and project-cash flows from the sponsor (Idem, p.228). This stand-alone firm, a project company, also known as the special purpose vehicle (SPV), founded by the private party to finance the PPP project offers a number of advantages as compared with the corporate finance to be considered by the potential investors (see Annex 4).

In the end I thought it to be useful to create a table, based on the re-elaboration of the World Bank document on PPP, Merna and Njiru, 2002 book and Delmon, 2011 book, where I put all the most essential elements of PF that constitute the core of this financial instrument, as well as the

elements often widely covered in PF literature, in order to find some possible critical aspects in the relationships between PPP and PF, as well as to give some order to the already complicated and multifaceted instrument (see Table 3).

4 The economics of PPP and its decision-making process

The issue pertinent to the evaluation of the PPP cost effectiveness on behalf of the government necessary for the subsequent decision on choosing among various delivery modes of public infrastructure procurement is a well-covered and discussed topic in the literature. It is also widely recognized that such a decision usually comes after the determination and evaluation of several factors, among which the value for money (VfM), affordability and fiscal risks are the most critical. Considering that VfM, VfM for PPP in particular is a complex tool as well as quite a broad subject, lacking uniformity and clarity on what exactly it comprises, "the VfM objective being very often blurred", here I tried to bring some order by calling, on the one hand, generally accepted aspects and, on the other hand, still unresolved and controversial ones, which still represent critical points for PPP economic evaluation (Burger and Hawkesworth 2011).

It is agreed upon by all the PPP scholars and policy makers that VfM should be a primary objective in PPP design. The better VfM is also one of the reasons for the government to use PPP for the infrastructure provision instead providing it directly by involving the public funds. There are different methods of assessing VfM used in different countries and differing by the level of involved complexity. The public sector comparator (PSC) is the most widely used and the most preferred assessment instrument because of its relative simplicity and subjectivity (used by the governments of Australia, UK) (OECD 2008). "PSC calculates the in-house implementation costs and is used as a benchmark to compare alternative policy options" (Idem, p.72). It helps the government to decide what delivery mode to choose to provide the public service. Grimsey and Lewis in their paper in which they provide an overview of VfM assessment in PPP, focusing in particular on the role played by the PSC basing on the study of 20 countries, arrive at the conclusion that even though PSC is used in many countries and is regarded a valuable instrument for assessing VfM, it is not universal and other alternative to PSC approach methods exist (Grimsey and Lewis 2005).

This assessment tool is not without the criticism of course. Among main points under attack, reported in the OECD book, is its hypothetical nature; the cost and the long time required to compile it and making each bidding company go through the creation of a projected PPP model; the risk to produce fake precision, since both PPP and PSC involve assumptions about the future;

and, finally, the choice of the discount rate: whether to use the same one for both the public and private sectors (OECD 2008, p.75-77). Moreover, the issue of affordability and budgetary limits have an impact on the PSC. Thus, it makes no sense for the government to compile and use PSC to compare two delivery options in situations where, because of the affordability or budgetary limit problems, the public procurement of the project is not feasible.

One should also bear in mind that using the PSC serves to measure the relative VfM of a PPP before signing the contract as well as to help to set a performance benchmark for the PPP. But as the authors fairly notice, the performance of PPP must be controlled during the whole life of the project, in order to "ensure that actual performance will yield the expected VfM" and "the frequency of such inspections usually differs between countries" (Idem, p.81). Whereas-according to Grimsey and Lewis one of the weak points of VfM instrument is its simplistic understanding, since, as they claim, it is very often taken as the lowest cost and the VfM test is executed simply as comparison between two procurement modes (Grimsey and Lewis 2005, p.375). Moreover, two important determinants for the VfM – presence of competitive environment and risk allocation are suggested, adding though that they two alone do not guarantees VfM (Idem, p.347).

Whereas Andersen in his paper on VfM drivers in private finance initiative analysing various experiences of PFI projects in the UK, identified six main determinants of VfM, that are also agreed upon and accepted among public service project managers (Andersen 2000). These are risk-transfer, the long-term nature of contracts (including whole-of-life cycle costing), the use of an output specification, competition, performance measurement and incentives, private sector management skills (Ibidem). The OECD book reminds that the choice while deciding between PPP and public provision should be based on consideration of affordability and value for money; affordability, limited budget allocations and legally imposed budgetary limits; the role and nature of risk transfer; the level of competition and, finally, the nature of service.

Speaking about VfM the affordability concept has also been often called upon, because these two are tightly connected with each other. These two concepts are of extreme importance because, first they represent the benchmarks for PPP viability, and, second, because of the widespread (especially in the past) erroneous belief that recording the project "off the books" makes it more affordable for the government. Whereas, a PPP can make the project affordable only "if it increases the VfM compared to the VfM realized through traditional public procurement..." (OECD 2008, p.36).

The authors remind not to confuse the intertemporal budget constraint with fiscal rules, or budgetary limits (imposed either legally or as political commitments). This confusion existing around the effect of PPP on affordability originates from the fact that PPP's "cash flows and balance sheet differ significantly from that of traditional procurement" (Idem, p.38). Thus,

according to the authors, it is the comparative assessment of affordability of both routes (PPP and public), taking into consideration the short- and long-term perspectives, that must determine whether the project is affordable or not. They also warn the governments against being guided by the wrong incentives and being tempted to get the project off the books not in order to increase value for money, its efficiency or to ease government's fiscal constraint, but to perform an accounting trick and to circumvent the budgetary limits. The latter will only lead to the diminished VfM compared to the traditional public procurement, will worsen the quality of the investment, aggravate the fiscal risks and annul the PPP advantages.

Corbacho and Schwartz in the chapter where they address fiscal risks implied by the PPP for the government, besides indicating the main reasons of fiscal risk - 1) the poor quality of the investment projects, 2) weak legal and fiscal institutional frameworks for PPP, 3) ill designed accounting and reporting systems - also point to the incorrect use of PPP caused by wrong motivations underlying PPP and point out the need for the governments to know how to face fiscal risks and the necessity to have appropriate tools to manage them (Corbacho and Schwartz 2008, p.89). Thus, PPP, as noticed by the authors, very often is used by governments because of their appeal to "to defer spending on infrastructure without deferring its benefits" in order to "bypass spending controls", to move public investment off budget" and "debt off the government balance sheet" (Idem, p.89). These are also, according to the authors, the reasons why the fiscal risks are present even in case of good contractual risk-transfer arrangements. The authors also talk about appropriate disclosure and consideration of all (direct/contingent, explicit/implicit, known/unexpected) government liabilities, arising from multiple risks connected with PPP. By way of summing up, PPP should be the part of the government strategy, budget cycle and fiscal framework.

One of the instruments to manage fiscal risks proposed by the authors is the gateway safeguard system consisting in entrusting the finance ministry with the "power to stop the project that does not satisfy VfM and/or affordability considerations" to ensure that only valid projects are advanced. Since both the VfM and affordability change as the project advances, the appropriate gateway safeguards should be installed, as argued by the authors, at certain stages of PPP contract preparation and negotiation. Examples of gateway safeguards are also provided.

Finally, Yseult claiming the lack of contractual relationships between PPP and third parties and examining the role of the law in regulating these relationships, the instruments available for third parties to control the discretion of the public authorities, to be more exact, also speaks about VfM as the main standard for assessing the political accountability of PPP, the key standard in the overall assessment of PPPs, and the principal standard in evaluating the efficiency of public authorities in implementing PPPs, in general (Yseult 2014). The problem is that VfM, according

to him, does not capture other important factors, such as "adequate or sustained fulfillment of social and human needs". In other words, nowadays the efficiency in spending public money by means of VfM indicator is the main element for assessing the infrastructure and services provided through PPPs/PFIs, the thing that requires immediate correction and modification.

The last topic I included into this section and the one I would like to stop at is the PPP performance assessment and the challenges PPP poses for various performance assessment frameworks, since all the above mentioned instruments directly or indirectly have to do with the assessment of the PPP performance and the results it reaches.

Thus, Stadtler in his paper where he focuses on PPP for development (see PPP definition glossary) proposes a new broad evaluation approach that is able to "capture a PPP's complexity and multiple linkages with its environment" and evaluate both direct and especially indirect effect it produces (Stadtler 2016, p. 71). The author proposes to "adopt a stake-holder approach" in order to achieve thorough evaluation of PPP results (Idem, p.71). His main critics of the existing evaluation frameworks for PPPs for development in the traditional PPP discourse is that they ignore the multiple indirect PPP outcomes that contribute to reaching the development goal and thus, do not capture the related costs and benefits for different involved parties (p.72). The author also speaks about the lack of attention to the stakeholder evaluation approach in the PPP discourse in general, noting its development only in the literature on non-profit partnerships (with reference to Austin and Seitanidi 2012; Clarke and Fuller 2010, p.72). In fact, Liu et al. in their paper in which they proposed the life-cycle critical success factor framework for potential PPP performance assessment and improvement, one of this framework alleged advantages is that is serves as communication tool for improvement of the stakeholder satisfaction, crucial for the overall PPP project success (Liu et al. 2014).

Therefore, the main contribution of Stadtler's "broad evaluation conceptualization" approach to the PPPs for development discourse is including of "the tri-sector partnering mode", integrating it with time dimension and indirect effects (Stadtler 2016, p.73). The following advantages of this framework can be pointed out. First, the attractiveness of the framework to different parties (public, business, society), since it addresses the outcomes for multiple stakeholders. Second, its applicability at different stages, since it differentiates between short-, mid-, and long-term benefits. Finally, its ability to consider indirect outcomes and therefore to determine the final results if PPP was not available, as well as to anticipate implications if the PPP had to be terminated.

5. Political issues and ethical side of PPP

As reminded by Yescombe, who in his book identified 9 elements the PPP debate revolves around, "the political context of this debate has to be borne in mind" (Yescombe 2007, p.15). The OECD book also underlines the crucial role of the political commitment from the highest authorities before undertaking the PPP initiative (OECD 2008). Besides providing the guidelines for developing a PPP policy framework, the authors underline the importance of factors directly related to the political commitment of the government. Thus, clear access to information, that guarantees improved transparency, accountability and effective project management; robust legal framework, comprising supranational bodies (EU, IMF), national legislation, local or regional statutes and the project contract; and, finally, compliance with enforcement both of the private partner, as well as of its subcontractors are mentioned (idem.)

Political support is critical for three reasons: firstly, because government possesses the necessary authority to convince general public of the usefulness and numerous benefits for the citizens of the PPP. Secondly, it is decisive to ensure private actors the consistency of the political commitment in the long run and thus to minimize political risks. Thirdly, political engagement, or to be more exact, strong regulatory regime, the public can trust, is vital for realizing PPP as well as for avoiding potential negative effects of PPP because of the incomplete nature of the PPP contracts. A well-developed regulatory policy framework for PPP, is of extreme importance for two main reasons. Firstly, it is important to incentivize the correct behaviour from all the participants without over-regulating them; secondly, to protect investors against expropriations of the invested capital (idem).

Expropriation or regulatory taking by the government, that has more possibilities to take place under PPP, rather than under public provision, is one of the reasons why an appropriate institutional setup (the system of formal laws and regulations) is an indispensable precondition for the right PPP implementation according to Engel et al. too (Engel et al. 2014). Among other most important preconditions for PPP to exist mentioned by the authors are the continued property rights protection, including those arising from contracts with government agencies, and mature financial market (idem, p.17). Corbacho and Schwartz also talk about the importance of robust legal and institutional frameworks of PPPs, understanding institutional framework as the balance between centralization and decentralization (Corbacho and Schwartz 2008). Moreover, they notice that there is no single best model and that institutional setups differ by country. For Berg et al. for instance among the factors necessary for underpinning public private cooperation in infrastructure, legitimacy, that could be guaranteed only by the state (together with credibility and efficiency) are of certain importance too (Berg et al. 2002).

Coghill and Woodward focusing on giving explanation to why PPP unlike privatization "failed to become a major political issue" address some other controversial political questions and give their interesting, sometimes quite intuitive answers to why, for example, governments have managed to apply them "without opposition and without having to justify their use" (Coghill and Woodward 2005, p.81). One of the reasons according to the authors of such an easy entrance of PPP into the government political agenda without any opposition and almost immediate "embrace" of this delivery method by the governments lies in the attractiveness of PPP for the government and its numerous benefits (see Table 1, column D). For example, constructing important infrastructure projects without increasing government debt is perceived by the general public certainly as demonstration of good government's managerial abilities, thus constituting the electoral benefit. They have also undertaken such a vulnerable issue as who are the real beneficiaries of PPP, asserting that the government can be undoubtedly considered as such, while the benefits are not so clear for the general public. The authors also call not to ignore the values of non-economic nature, such as "accountable governance, democratic control, participation in decisions".

Finally, an interesting, "semantic" explanation is provided for "why the PPP have managed to stay off the agenda of electoral politics" alleging to its non-political nature. The answer lies in, according to the authors, first, the terminology itself, PPP being a new expression that has not acquired negative connotations yet, as well as the partnership word itself that implies positive features. Then, the PPP intrinsic complicated nature creates difficulty for the general public to understand its benefits and PPP implications, as well as tight links between political parties and business interest who sustain each other because of reciprocal interests. Finally, again, the universal dominance of neo-liberal economic paradigm does not help the general public to raise opposition against such a well-advertised market economy instrument. By way of summing up, it is extremely important to bear in mind that the final user should understand the validity of the PPP mechanism and be ready to pay the fair user charges to fund the project for PPP to reach successful results. This validity can be guaranteed and transmitted only by the government through demonstration of its political commitment to the project, which, in turn, should be underpinned by a robust legal and institutional setup and a well-developed regulatory framework with all arising from it rules and requirements to respect and abide by.

One of the recently emerged themes closely linked to the role of public administration is the issue of corruption that, as it has been revealed, did not receive proper attention yet and the socio-ethical dimension of PPP. There has been highlighted the need to assess the impact of PPP not only from the strictly economic and technical point of view, but also from the ethical-social and general societal welfare perspective. Thus, the authors of the OECD book among many other issues they addressed also express their concern about corruption and unethical behaviour

problems present in PPP, the topic where research, as they claim, has been sparse. Greve and Hodge point not only to the appearance of new partnerships (with the non-profit sector for instance) but also to the shift from considering strictly economic and political criteria to broader social ones when evaluating the PPP project success, as well as the emphasize of multiple partners, rather than two (Greve and Hodge 2013). Thus, the forthcoming of broad public issues, focusing on social criteria rather than financial ones only, around which the new partnerships will develop, is underlined.

One of the concerns raised by Urio is the emerging trade-off situation introduced by the PPP, that is the tendency of giving priority to economic efficiency over social equity for example, or security over economic efficiency (Urio 2010). The author raises concerns on how, for example, "costs for greater security or long-term sustainability can be accounted for in these projects", the projects that should also promote social equity and be financially more efficient than other forms of government provision (idem, p.74). The attractive win-win situation, defended and advertised so ardently by the PPP proponents is still quite difficult to reach. Osborne also underlines a number of positive public policy outcomes besides the usual well-publicized numerous advantages PPP offers, such as a more socially inclusive society thanks to the public and private components integration (Osborne 2000, p.2) (for more examples see Table 1, Column B).

Carroll and Steane also raise the problem of potential ignoring of social values and societal welfare while pursuing the classical cost saving objectives (Carroll and Steane 2000). The neglect of social values, as pointed out by the authors, usually happens because of the dominance of private-sector priorities over those of the public-sector partner. This situation of dominance, in its turn, usually occurs as the result of differing public, private and non-profit sectors' expectations and perspectives that obviously have its impact on the partnerships. The classical neo-liberal economic values of cost effectiveness, efficiency, competition and entrepreneurship do not get along together with the community social values of equity and equality, thus, usually ignoring the overall social harmony of the society. The ambitious goal of many politicians and policy makers of achieving simultaneously "market competitiveness and social cohesion" remains to be a dream as indicated by the authors.

Yseult in one of the chapters of his book studies the problem of lacking contractual relationships between PPP and third parties, and assesses the role of the law in regulating these relationships, focusing in particular on the instruments available for third parties to control the discretion of the public authorities in implementing PPP (Yseult 2014). One key problem in PPPs, as referred by the author, lies in "the nature of relationship between PPPs and individual users" (p.257). Two techniques – VfM (taxpayer's money) and courts (law techniques) used nowadays to control the public discretion, as sustained by the authors, do not ensure that public discretion in

PPPs/PFIs is used in the best interest of third party and users. These two mostly widespread legal techniques, one based on the state-analogue model, with accountability being the key element of control of public discretion, and the other market-analogue with VfM as the principal standard, that are used to control and organize the lacking contractual relationships between third parties and PPPs do not ensure coordination between the former and the later though.

Thus, the main concern raised by the authors is that this "hybrid regime of accountability and regulation" do not lead to the coordinated relationships between PPPs and users. Moreover, the fact that the most noticeable relationship between PPPs and users is the understanding of third parties only as taxpayers obviously acknowledges neither the variety of individuals' potential roles in PPPs/PFIs nor their vulnerability. According to them, if PPPs had been organized in either exclusively state-analogue or only market-analogue model way, there would have been better results and more control over the main provider's discretion and there would have been more guarantee that it is exercised in the best public interests. Whereas the actually applied hybrid design with a single provider and unique control mechanism through predominant VfM can not ensure the coordinated relationships between PPPs and third parties.

In the end the calls for abandoning VfM is assessing the PPP efficiency, for turning away from perceiving third parties in their taxpaying capacity only, but to see them as users needing the PPP to provide infrastructure and services. He suggests moving beyond previously mentioned market-analogue and state-analogue models, but developing of more-encompassing standards and models to assess PPPs to coordinate those interests. The author proposes the community-analogue model, based on the ethics of care, that in his opinion should become the standard for assessing the quality of public authority discretion in these two-way relationships. In such a way, the authors draw our attention to PPP's social and collective dimensions and remind that PPP should not be concerned only with organizing the taxpayers' money, but should aim at ensuring broader benefits for the whole community, both directly and indirectly. Moreover, this new ethical framework should in his opinion also be used "to support the development of citizen's identity for the benefit of the whole collectivity" (p.244). Certainly, the ethics-of-care as any other framework has its limitations: three critical points are mentioned by the author.

6. PPP and developing world: (hard) work in progress

Moszoro et al. in the chapter where they give an overview of the empirical literature and previous studies on the determinants of private participation in infrastructure (PPI), with the main focus on EMDEs (emerging markets and developing countries), conclude that literature on infrastructure investment is much thinner in comparison to that focused on foreign direct investment (FDI) (Moszoro et al. 2015, p.21). Other important conclusion the authors arrive at is that the central precondition for attracting private investors in infrastructure in developing countries is a predictable and supportive enabling environment, that reduces the costs and risks of investing in infrastructure. They also provide a list of factors that give confidence to investors, or preconditions to attract private investors, among which there are peace, political stability (and certainty of regime); rule of law and clear property rights; good governance (with transparency and accountability); enforceable contract; absence of corruption and enabling institutional framework. There are also economic characteristics that proved by them to be determinant in attracting private sector investment. Among them there are the size of the market (GDP and population), inflation (macroeconomic conditions), openness (proxied by trade), debt level of the country (the total debt service divided by the gross national income) and access to finance (access to commercial bank credit) (Idem, p.24).

Grimsey and Lewis studying the PPPs in emerging markets also underline different environment for infrastructure investment in these countries compared with that of the developed countries (Grimsey and Lewis 2007). These differences are mainly due to different degrees of riskiness, institutional and sovereign risks (see PPP Glossary) being of major prominence. Other obstacles for PPP existing in these markets mentioned by the authors include “poor understanding of PPPs in the public sector”, “undeveloped domestic market for potential bidders” and, consequently, little experience in organizing and managing PPPs, and the absence of “PPP culture” in general (Idem, p.221).

Talking about attractiveness of emerging markets for private investment in particular the authors underline the lack of budgetary resources as well as enormous infrastructure needs in these countries. Whereas talking about the benefits that can be accomplished with PPP in general, but which might be especially critical in emerging economies, the achievement of social, commercial and environmental goals is mentioned. The latter ones are of particular prominence in emerging countries because of poor use of resources and low revenues covering only a small portion of the utility cost. A series of problems of PPP that might be encountered and which should be overcome in these countries, such as the absence of reliable commercial and legal framework, limited

financial flexibility of the public sector, complex, more expensive and time-consuming transactions costs in the development stage is mentioned.

The authors also talk about changing trends in financing infrastructure, the sources of finance, to be more exact. This trend, consisting in the shift from individual investors and entrepreneurs to the institutional investors as the main providers of the private risk capital finds its reflexion in the developed countries as well. Considering the higher riskiness of the projects, that include various risks (political, commercial, exchange rate, currency risks that are even more difficult to assess in the emerging markets) this shift is even more obvious according to the authors. They also describe some "innovative financing techniques" aimed at lowering some of the infrastructure risks, faced by these countries. The techniques include structured project finance and credit from specialized financial institution; credit enhancement, including "mezzanine finance" and debt subordination; government equity support as well as government and multilateral development bank guarantees.

Speaking about the barriers to PPP in these countries the authors distinguish between those connected to the emerging countries particular conditions (such as underdeveloped legal, regulatory, financial frameworks), from the obstacles determined by the PPP intrinsic complexities. The latter cover the complexity of the interactions between all the parties involved, the time consuming preparatory and commissioning process, the requirement of strong political support. Other barriers mentioned by the authors concern the commercial and legal environments. These are: legal framework, finance, taxation, accounting, public acceptance and public administration. In conclusion, the authors also suggest the components of PPP being attentively scrutinized by all the parties involved, because of the PPP much more complex process as compared with the traditional public procurement mechanism.

The advice of attentive supervision and scrutiny of PPP, together with having right incentives and appropriate knowledge as prerequisites for PPP to start in the right way, and to ensure that PPP fosters rather than impedes economic development and growth is also given by Hellowel who examines the appropriate role of PPP trying to find out in which way PPP can contribute to the efficiency of public sector investment in infrastructure (Hellowel 2015, p.54). The before mentioned prerequisites, especially the right motivation and expertise, are necessary for all the economical environments, but especially crucial for low- and middle-income countries, since they enable to assess the PPP project cost objectively, as well as to manage it prudently.

Finally, Urio in his book on success and failure factors for in-transition countries studies 4 different, from the political, administrative, legal and economic environment, countries - Poland, Russia, Ukraine and China - "for the purpose of determining the favorable and unfavorable conditions for the adoption and implementation of PPPs" (Urio 2010, p.19). The choice of the

authors fell on studying 4 different in-transition countries, all being in a pre-PPP stage is explained by them alleging to the proponents of PPPs who sustain numerous benefits of PPP implementation in all countries, i.e. with varying situations, differing conditions and at different pre-PPP stages. The only prerequisite is the presence of certain institutional arrangements, which include enough space for private sector in a free market economy as well as "good governance". Good governance implies the economy and polity components. The core of the good governance model, according to the author, is "accountability, transparency, democracy, financial rigour and liberalization of financial economy" (Idem, p.8). The second reason for studying the countries with big differences, rather than with close similarities is the author's intention to test the validity of the "Washington consensus" model postulates, especially the convergence thesis[8].

[8] The convergence thesis postulates "that the validity of Western model and its internationalization will force all the countries to adopt a free market economy, and this will inevitably drive them to also adopt the political counterpart of the model" (p.p).1

II. PPP In Healthcare Worldwide

1. General overview of PPP in healthcare

Infrastructure bottleneck is one of the major constraints for development and growth of the majority of countries (Kumar et al. 2017). Development of infrastructure objects, be it transport (a road) or healthcare (a hospital), i.e. construction of the physical component entails high costs for the government purse. At the same time, infrastructure is the guarantee of the economic growth of the country, and what is important, infrastructure quality makes a difference for the peoples' life. Healthcare infrastructure even alone, without considering relative health service provision, represents a significant cost for any country. A lot of countries worldwide experience investment backlogs, financing difficulties, even financial distress when it comes to healthcare sector. According to WHO, in 2015, the world spent USD 7.3 trillion on health, accounting for nearly 10% of global GDP on overage between high-and middle income countries (WHO 2018). Investments in health care, according to Plavunov, pursue two main economic functions: they ensure achievement of one of the main goals of any nation - the highest attainable level of health; and secondly, by improving the health and, therefore, the quality and expectancy of life, they increase the overall efficiency of the economy (Plavunov 2014).

Today health care, in general terms, can be defined as social function of the state aimed at protecting and promoting public health. Healthcare is a very delicate issue for any country's social infrastructure sector and highly politically charged area almost everywhere. Since health care is part of the public sector of the economy, these costs can not naturally be regulated by market mechanisms, but are coordinated to a larger extent by the state. Even the people of such socially advanced country as Great Britain, where PPP mechanism was actually born and the whole National Health System, its physical facilities component, was rebuild and refurbished thanks to this mechanism, were reported to be "attached to the ideal of universal "free" hospital and medical care and look askance" at the American private healthcare costs (Grimsey and Lewis 2005).

Healthcare sector has been and is still overshadowed, even though nowadays to a lesser degree, by mega profitable projects in transportation, energy, and telecommunications. Thus, Brazil, the Russian Federation, India and China have been recently actively promoting PPP energy projects, with Russia and India becoming the absolute leaders in PPP energy projects in terms of absolute outlays and growth (Global Market Information Database, Euromonitor Database). PPP in most of the countries of Central and Eastern Europe, for example, are dominated by road projects (Cangiano et al. 2014). The fact that in 2013, the main volume of investments in Russia

corresponded to the fixed assets of enterprises of the extractive industry (over 30%), while the volume of investments in the modernization of social infrastructure facilities didn't even exceed 3%, speaks about Russian wicked trend, at least in the past, of sharp underestimation and disregard of country's social needs.

If we further add the constantly ageing population, always falling birthrates and, consequently, higher elderly dependency ratios, pressing GDP, chronic disease, together with new technologies, always more knowledgeable and more demanding population, the picture of healthcare sector, leaning entirely on state shoulders, becomes even gloomier and, ultimately, unsustainable. It seems obvious that new sources of funding are needed. Thus, in the conditions of modern countries' budgetary deficits and always growing government health spending, it would be, if not impossible, but for sure unsustainable from economic point of view, and completely irrational not to cooperate with highly skilled private partner, rich both in proper capital and managerial as well as technical expertise. In fact, financial resources of the private party and its innovation propensity are more than welcomed by the governments of different nations wishing to modernize crumbling healthcare infrastructure facilities. In the end, "the wicked problems" of the healthcare are too complex for the government to solve them alone (Mason and Mitroff, 1981).

It is true enough that the health provision has always been associated with the state and that the government has always been the main guarantor of the most precious country's resource – the health of the nation, it is also true that no healthcare system in the world is funded only by the government. The state has been historically the main provider of infrastructure projects, financing, constructing and managing the nation's major infrastructure facilities. At the same time recently the fiscal constraints experienced by many countries' already indebted economies force them to carefully prioritize and restrict public expenditures (Nikolic and Maikisch 2006). Moreover, comprehensive public health spending should also cover service delivery, and not just physical infrastructure of healthcare facilities. Therefore, governments all over the world are searching for the ways to cope with decreasing governmental budgets and booming healthcare costs (Blanken and Dewulf 2010). By doing that, the state's eyes always look more often in the direction of the private sector in search of the loyal and efficient partner with whom to collaborate for the fulfilment of this tricky health issue.

Germany, for instance, is continuously moving its hospital network towards private control, the number of private hospitals is growing consistently from 1991. The US healthcare construction for already a few years for 80% is financed by the private investor, and the care management of healthcare provision for the last 10 years is guaranteed by the private party. Canada, being faced with the requirement to refurbish and adapt the ageing facilities, has also chosen the PPP mechanism in order to provide on-time and on-budget delivery of about 50 new healthcare

facilities and have committed nearly 10 billion $ in funding. Latin American countries are also making progress in PPP healthcare direction. Thus, Brazil has already two PPP hospitals, one completed and another being planned. The Mexican Ministry of Health has been developing a PPP program of eight greenfield hospitals. Peru and Chile have also launched their first healthcare PPPs (PwC, 2010).

The complexity of healthcare organization as well as citizens' demands and expectations regarding healthcare provision continue to grow, and so do the challenges that the public sector is facing in having to finance, manage and provide welfare and guarantee health to the nation. PPPs in healthcare are evolving too: four distinct types of hospital PPPs have been identified basing on the principle objective of the partnership as well as what each partner buys/sells from/to each other and suited to particular needs of the healthcare system, country's capacities to fund the project, the legal framework, the government ability to supervise (Montagu and Harding, 2012). Therefore, new pressure points are emerging in the public-private relationships: both partners need to recognize these pressure points well in advance.

In light of the above challenges the investigation and in-depth study, of even one, aspect of PPP acquires even higher priority and importance. PPP projects in healthcare have also recently started to acquire their market share and to attract private investors thanks to growing public awareness to the issues of health and wellbeing and, as a consequence, major government sensibility when it comes to allocating budget to various social needs. Moreover, talking about European countries, where healthcare is also considered to be a public service provided either through social security insurance system, generally known as Bismarck model or national tax-funded system, known as Beveridge model, the PPP instrument is applied regardless of one or the other model of healthcare provision system (EPOS Health Management, 2013).

PPP structure has been widely recognized as one of the best models of bringing together the private and public partners for the achievement of socially important goals, such as providing of healthcare infrastructure and care delivery can be. PPP is said to combine the best of both worlds (UNECE, 2008). The classical promises of collaboration with the private partner in healthcare sector, within PPP framework are improvement of service quality achieved through better personnel expertise level and access to the latest medical technologies, enhanced efficiency cost by means of improved management of service provision, as well as overcoming of some investment challenges (Nikolic and Maikisch 2006). Though, these "hybrid solutions" may face some design and implementation difficulties because of heterogeneous, sometimes conflicting aims, missions, organizational cultures and legal frameworks adopted by the partners (Cappellaro and Longo 2011).

Public–private partnerships have become a common approach to health care problems worldwide, especially in developing countries (Barr 2007; Jefferies et al. 2007). If PPP mechanism in general rotates around the principle of mutual benefit for partners and satisfaction of their, apparently potentially conflicting interests, while achieving a common, as far as the project itself is concerned, aim, a PPP healthcare initiative, among other things, should be based on the concept of equity of health and benefit for the whole society, since a new facility is "sponsored" with the citizens' one common purse. In fact, PPP is a kind of a "challenger", because it can "equalize" healthcare provision for all the people, independently of their material well-being (PwC 2010). Moreover, the PPP final result, meaning the newly provided facility and/or services, as it was contemplated by the government plan, should be well integrated into and be of support to the country's overall healthcare system. Because a PPP in health is meant to address "broad questions of providing sustainable health outcomes rather than on the day-to-day interaction that occurs when the government buys a health service from a private supplier or where it leaves the entire matter of health service supply to the private sector" (Nishtar 2004).

A growing number of low- and middle-income countries look always more often to PPP healthcare projects as the possibility for substituting or at least reconstructing the outdated and crumbling structures. More and more developing countries are exploring this cooperation model so as to outsource the health delivery management to the private partner (the latter is more typical of the developed countries, who are well familiar with PPP working modality – Spain, Germany, France). These seemingly efficient and effective models of collaboration between public and private, though being highly welcomed all over the world, still face the major dilemma – the appropriate balance of private and public resources in financing and managing health (PwC 2010). Chan, for instance, speaks about the importance of finding a "delicate balance" between private sector capacity, government regulatory function and public satisfaction (Chan et al. 2008). The balance, obviously, involves and entails a lot of intertwined issues, starting from the choice of the right PPP structure, ensuring the best combination of return both for private party and ultimate buyers, i.e. taxpayers, and finishing with socially responsible and consciously installed relationships between two partners without jeopardizing intrinsic interests of neither of them.

This balance is even more fragile in the countries where PPP is at its embryonal stage or is about to acquire its full might, such as CIS countries for example, where strong omnipresent state with its paternalistic approach has been historically taking care of all its citizens' needs, including the most vital one – health of the nation. Hsiao after having studied the national experiences in marketization of healthcare systems, or, as he defined it, "illusory magic pill" of four developing countries, came to conclusion that "neither pure centrally-planned nor free-market health systems can achieve maximum efficiency - a complex mixed system seems to be the answer" (Hsiao 1998).

Therefore, a collaborative approach with efforts put both, by public and private sectors, is needed to overcome healthcare challenge.

Every country is trying to find its own appropriate balance of public and private resources, by crafting different types of incentives and has different motivation for turning to PPP solutions: it can be risk sharing, expanding capacity, access to the private financing resources, increase of efficiency, or innovation acceleration. It is interesting to note that while in much of the countries where it is used the most, financial (budgetary) and risk transfer consideration usually prevail, in the majority of Eastern Asia countries it is the possibility to acquire and transfer skills and to develop and retain intellectual property that dominates other motivation of looking at PPP solution (PwC 2010). Thus, Middle East countries being quite new to PPP solutions, but also craving for modernizing the existing facilities and attracting new capacities, in the hospital field, in particular, see in PPP an interesting ally in accomplishing their infrastructure targets, as well as overcoming their numerous capacity challenges. Though generally speaking the reasons for attracting private companies into the healthcare project implementation don't differ much from those in other sectors and are similar all over the world: private financial and intellectual capital inflow, risk allocation, cost and service delivery efficiency.

The history of PPP knows moments of disillusionment and high levels of skepticism towards "privatization" of health (Hellowel and Pollock 2009; Vecchi et al. 2010). Despite various criticisms of PPP and emerging studies pointing to its presumably numerous defects and cost inefficiencies, if it was not for PFI initiative in Great Britain, the construction of many infrastructure facilities would have been simply impossible and, therefore, the country's development would have arrived at a stalemate. If we take the specific example of Great Britain, approximately 100 buildings in 12 years would not have been constructed without private partnership in the conditions of severe underinvestment in NHS hospitals by the UK government during the 1990s (PwC 2012). In the years between 1996 and 2006, 87% of English hospital projects have been delivered through PFI, which became a dominant source of capital investment of NHS since 1990s (Hellowell and Pollock 2007). Not only the viability of the project in some cases is ensured by the PPP procurement mechanism, but also considerable cost savings. Thus, the Spanish Alzira project of partnership (referred to as Alzira model", that gave birth to a new PPP type, called public-private integrated partnership) which includes hospital and primary care services, saved government 25% of the cost of providing care.

With the PFI introduction the UK has significantly reformed the core philosophy underlying the provision of healthcare services to the public: the shift from targets to outcomes (in the evaluation of performance management systems) took place and the principle that any willing provider, no matter public or private, could provide healthcare services to citizens was installed

(Anderson 2011). The trend to measure PPP success by the project performance and outcomes, as well as PPP's focus on value for money and better overall quality of procurement has grown into a well-established rule. It was quite a revolutionary change, an idea that for some countries, due to historical, economical reasons, even nowadays remains difficult to digest, to say nothing, to accept and to apply in practice. Recently governments all over the world turn to the private sector more often in search of involving them more in public infrastructure construction and services provision.

There are also negative PPP examples in healthcare and well-publicized failures in different countries. The recently completed Karolinska 700-bed hospital in Stockholm, for example, which was estimated to be the largest hospital PPP in the world and most innovative in Sweden, the biggest deal of €1.5 billion, turned out to be too costly for taxpayers and an ill-managed political experiment in general, with the Finance Minister investigating into how such massive cost overruns and mismanagement could have occurred[9]. The destiny of another PPP project, the largest PPP in Africa, revitalization, reconstruction and upgrading of the biggest, as claimed by officials, hospital in the world, 2,964-bed Chris Hani Baragwanath Hospital is still not clear. PPP tool is not a magic wand, but it is constantly evolving, learning the lessons taught by the bruises it gained along the way. There is still a myriad of unmet health needs all over the world, especially when we talk about developing world, low- and middle-income countries where PPP tool can help to fulfill some of them.

PPP model is constantly increasing its popularity both in developed and developing world for fulfilling their numerous health and welfare issues and is always acquiring more importance for provision of healthcare facilities in countries with poor quality of publicly provided infrastructure. The reasons of growing success of this infrastructure delivery method usually range from cost savings resulting from on time completion of the facility, to more efficient service provision, better management skills and private party overall resources; all this without depriving government from its supervisory and regulatory actions over the final result of the work. Though, in developing countries, in general, and in nations quite new to the PPP tool, PPP projects in healthcare together with education and other subsectors of a larger social sector umbrella usually follow behind road construction, energy production, waste treatment and other subsectors of the economic infrastructure field. According to estimations of PwC (for 2010) only about 10% of all PPPs in 2010 were in healthcare, and even nowadays, in 2018, the bulk of the projects is constituted by transportation and the majority of PPP projects worldwide have been implemented in non-health sectors and in upper-income countries (PwC 2010; PwC 2018).

[9] https://www.thelocal.se/20180207/finance-minister-calls-for-new-karolinska-hospital-inquiry

Despite such a cautious emergence, healthcare PPP seem to be confidently conquering the global infrastructure arena of health facilities. The nowadays partnerships are able to address a number of healthcare system needs: they not only provide new facilities – new hospital buildings, but also supply latest medical equipment and efficiently deliver various healthcare services. The growing appetite of the private sector for financing hospitals all over the world can be demonstrated by the amount raised for the funding of a new facility or by the deal size in general. The thing that is well shown by PwC with the help of a couple of impressive, both from financial commitment and dimensional point of view, healthcare projects that either reached their financial closing, or have been completed within 2010 in Europe, North America and Africa (PwC 2010).

The always more globalizing world economy with constantly new challenges presented to the governments who, for instance, should come up with the solution of efficient provision of public services in the conditions of scarce financial possibilities, require if not changing but surely redefining of government role and functions. In fact, the role of public and private parties in delivering public services has been redefined with the PPP solution coming into the global infrastructure arena. PPP has offered the government an opportunity to become**,** in case of a developed nation, a service regulator and commissioner instead of service provider, and in case of less advanced, from PPP point of view, country, a service provider rather than physical facility provider. Within the healthcare sector PPP enables government to shift its role from direct delivery of healthcare services for the population to their regulation, coordination and supervision, giving the private actor liberty and possibility to get the most of its propensity to efficiency and innovation, without losing typical for the state policy setting power prerogative and what is most important the property of the facility.

PPP in healthcare are believed to be based on five main, common for all health projects, drivers. Firstly, due to the growing government health spending and, consequently, very well perceived need for investment, a shift from assets to efficient operations in health providing paradigm is usually underlined. Secondly, financial crisis and latest recessions, definitely not favoring the already present budget deficits, create further budgetary constraints, impeding government's possibility to fund healthcare sector development. Thirdly, the government's role has evolved from service provider to service commissioner and regulator, ensuring better procurement. The fourth mighty driver is the access to expertise and skills that PPP opens up for the project's sponsors. Finally, the pace of population evolving needs and expectations determines the ever changing requirements for service capacity and type of provided services of the new healthcare facilities.

Coming back to the second driver, financial crisis, to be more precise, it is worth reminding that as in any situation it depends how you look at things - half glass full or half glass empty. Thus,

the global recession prompts the government to look for alternative ways of solving health and wellness delivery problems, and PPP has become a very attractive ally for the state in achieving this aim. Financial situation can encourage government to turn to a PPP solution and influence significantly the final outcome. Even wealthy countries, as noted by professor of global health at the University of California, San Francisco, Richard Feachem, once found in the situation of tight budgets are incentivized to invite the private sector for collaboration, and not only for financial reasons but also because of major efficiency gains (PwC 2010). Jutting, in his work where he was analyzing the prospects of a PPP by reviewing PPP case studies in the health sector of developing countries, has also underlined economic and financial crisis as an important macro factor favoring PPP establishment (Jutting 1999).

Bearing in mind that it would be incorrect and unreasonable to assert the superiority of one infrastructure sector over the other, the importance of the country's healthcare system is impossible to underestimate. One might even disagree with Chung et al, who state that "bad service delivery in healthcare may have much worse (catastrophic) consequences for many humans than for example a poor constructed road" (Chung et al. 2011), especially having fresh memories of a recently broken down notorious Morandi bridge in Genova, Italy. It is difficult to disagree though with the statement that health PPP projects are very different from other types of PPP projects, as far as goals, policy contexts and main drivers are concerned. Let alone the basic difference between manufacturing and construction field output in general: a big number of standardized similar items produced in stable and controlled conditions VS a customized and unique project realized under uncontrollable and often variable conditions (macroeconomic, political, environmental). The latter, as pointed out by Rebeiz makes all construction projects considerably riskier (Rebeiz 2012).

The PPP endeavor in healthcare differs from other PPP projects in that the final desired end result is not even a physical infrastructure as it is, but "a better health for a population" with a hospital being only a "small part of what keeps people healthy (PwC 2010). Moreover, and maintaining the "road" topic, as Nicholas Jennett, head of the European PPP Expertise Centre of the European Investment Bank, noticed: "highway remains a highway throughout its life", while the hospital, that became unrecognizable in the last 30 years and that will continue its evolution, presents a particular challenge for PPP in healthcare (idem).

The very mechanism and source of gains and profits and, therefore, incentives, for the private partner is very different in the healthcare PPP project. These and other dissimilarities, originated from different aims, motivations and powers of each player, can be summarized as follows (Montagu and Harding 2012):

1) The main purchaser of the outputs is the government, not an individual, what simplifies the payment process, but at the same time amplifies political risk for the private party.

2) The risk of the partnership success is more of a political nature, rather that the market demand one, since almost all income for the project is generated by the government's fixed previously agreed upon payments.
3) The output of healthcare infrastructure, due to its unique and sometimes unobservable characteristics, is difficult to quantify and measure.
4) The output of healthcare infrastructure, due to constant changes of the population age, composition, wealth, illnesses (especially in low- and middle-income countries) is the subject to significant variability.
5) Technology and organizational configuration of the medical service delivery is changing at a high, sometimes unpredictable, pace, adding further degree of risk and uncertainty into the PPP project.
6) Ratio of operating expenditure is much higher than the capital one in the overall cost of the project, limiting the possibilities of private partner of efficiency gains during the design and construction phase, while underlying the importance of service provision.

The above mentioned characteristics making PPP projects on health differ from other sectors where PPP can and is applied, can not be generalized for all the countries, irrespective of their national healthcare and legal systems, level of economic development and social framework, the government institutional capacity to oversee and negotiate, the public capacity to fund and private capacity to implement. Thus, the last point, about the ratio of capital expenditures being considerably lower than those needed for the operation of the projects, is less relevant, at least at the present moment of time, for many CIS countries. Russia, where PPP tool has received major development, including the social sphere, has only started its application in the healthcare sector. Therefore, the most commonly used model of PPP scheme in healthcare is the often referred to as PFI-model, that envisages a public entity to contract the private partner to finance, design, build and maintain a hospital facility in which public services are provided by the state. It doesn't exclude the possibility for the private partner, at least from the current legal point of view, to organize the management and provision of services, as long as they remain non-core medical ones, to the final user.

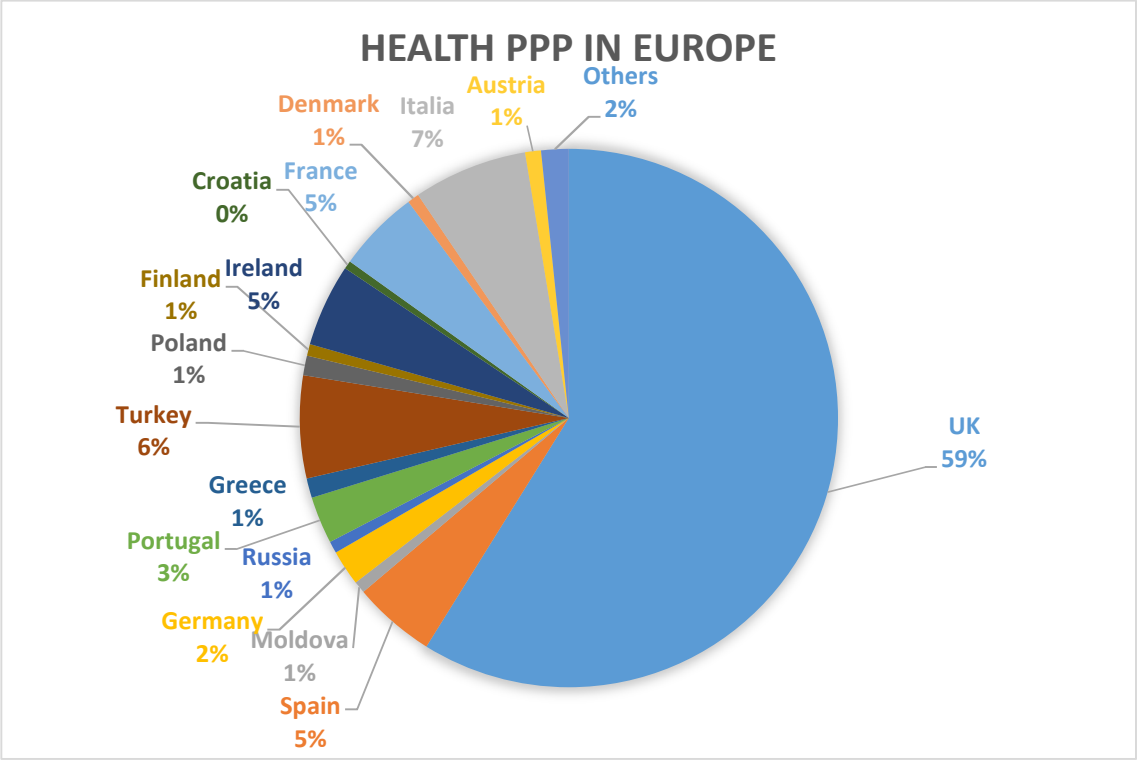
"Constructive engagement of the private sector in providing essential healthcare services" has been actively promoted by the World Health Assembly from 2010 (WHO 2010). The growing appetite of the private sector to execute the projects in healthcare in collaboration with the state and, thus, accessing a stable source of profit, is demonstrated by the considerable amount of newly contracted deals worldwide. Even though, PPP is not "a simple panacea or a silver bullet to fill huge financial gap in infrastructure investment" (Caveltry and Suter 2009), but in conditions of

government budgetary deficits, coupled with rapidly evolving medical technologies and treading on their heels people's requirements to health service provision, to address healthcare sector needs by means of PPP tool can be a worthwhile experiment.

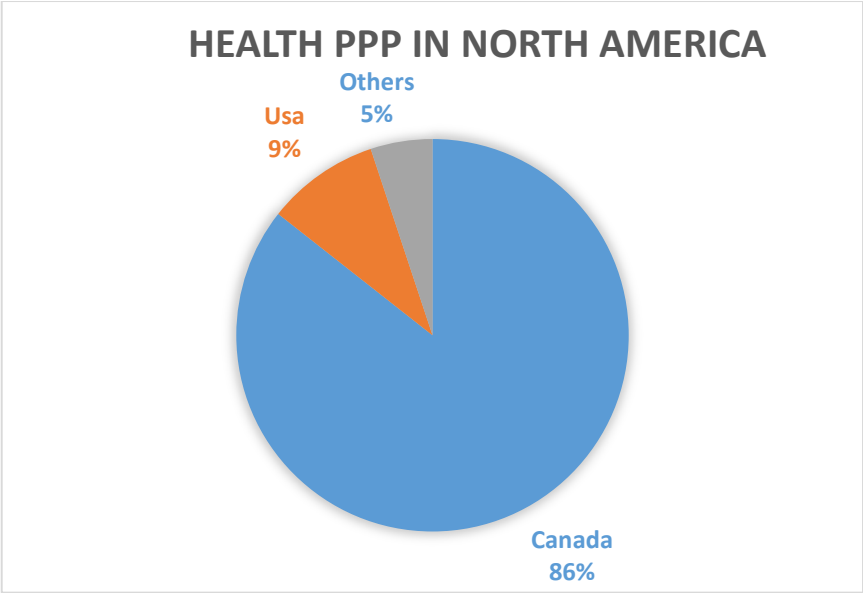
2. Alternative financing tools

In the last twenty years the PPP tool has been increasingly used for the construction of infrastructure objects. A ''worldwide trend towards the use of public–private partnerships (PPP) to improve the quality and cost effectiveness of government service provision" was identified by Smith back in 2003 (Smith, 2003). One of the sectors in which it has found its greater diffusion in numerous countries such as Great Britain, Italy, Spain, Turkey, Canada, USA, Australia, South Africa[10], is the health sector, for modernization and revamping of hospital structures (see graph № 1).

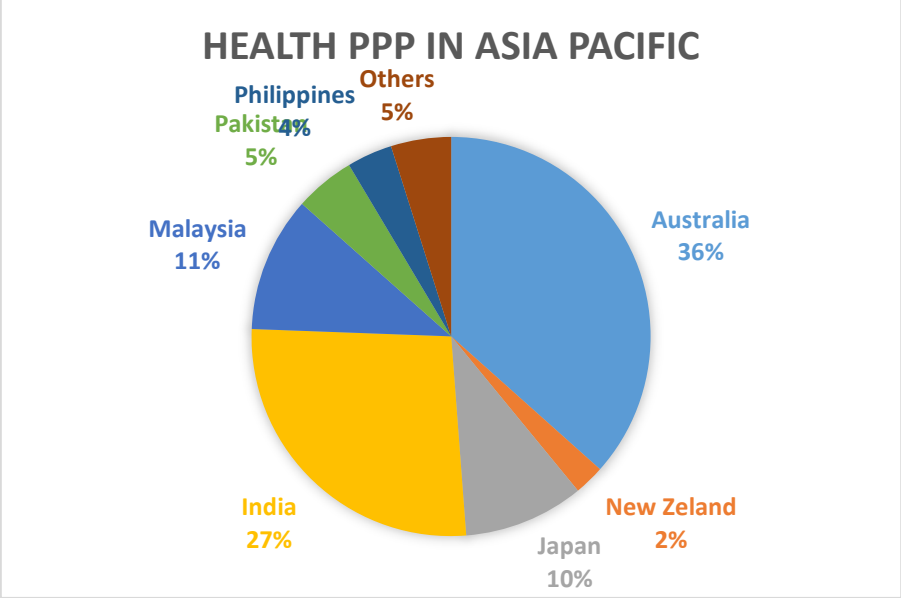
Graph №1: "World distribution of PPP Projects in Healthcare"

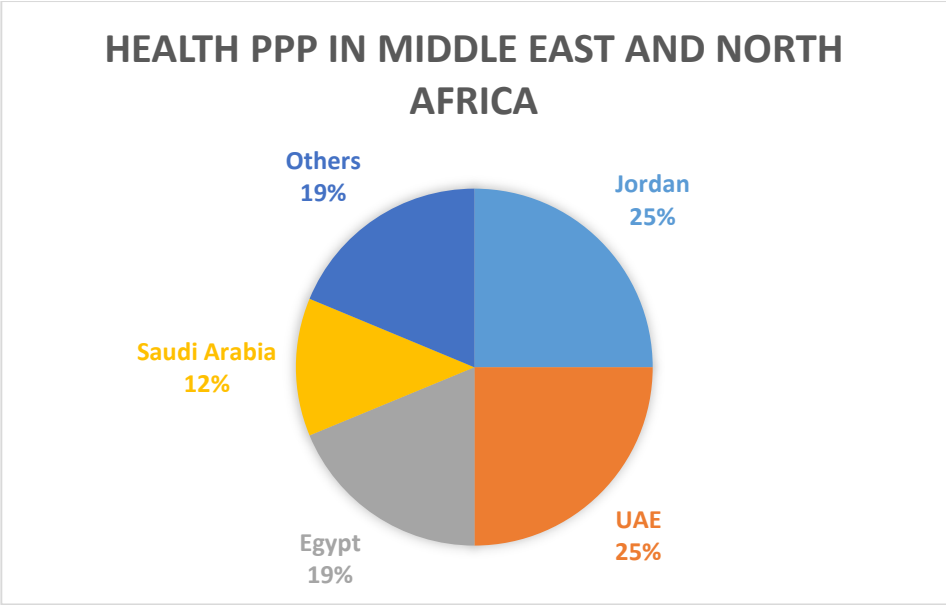


[10] IJGlobal Project Finance and Infrastructure Journal Project Database, accessed August 15, 2018


HEALTH PPP IN NORTH AMERICA
Others
5%
Usa
9%
Canada
86%


HEALTH PPP IN LATIN AMERICA
Others
3%
Brazil
24%
Mexico
30%
Chile
19%
Peru
14%
Colombia
10%


HEALTH PPP IN ASIA PACIFIC
Philippines
4%
Others
5%
Pakistan
5%
Malaysia
11%
Australia
36%
India
27%
New Zeland
2%
Japan
10%



Source: IJGlobal Project Finance and Infrastructure Journal Project Database, accessed August 15, 2018. Proper elaboration.

This road was followed to reconcile two needs. The first is related to the deteriorating situation of public finances, which witnessed the gap between the available financial resources and those necessary for the construction of health infrastructures grow. The second refers to the need to bring to the public sector the experience (know-how) of the private player in order to improve efficiency levels in terms of management and organization.

The projects that can be realized with the Public Private Partnership are usually classified as follows:

1) Financially self-sufficient projects (so called "hot works")

These are the projects of infrastructure that are able to generate financial flows deriving from the user fees. A typical example is represented by the construction and management of highways, whose concession allows the private company to return the investment and to obtain a profit (Vecchi, 2008).

2) Projects requiring payments from the public administration integrating user fees (so called "cold works")

These are the projects in which the prevalent revenue flow, during the operational phase, is ensured by the state. These projects include such public infrastructure objects, as prisons, schools and hospitals, for which the private company, called to build and manage the utility, in order to return the invested resources and to get remuneration, relies exclusively (or almost) on the periodic fees paid by the public administration. It is precisely this type of projects and in particular those in the healthcare sector that will be in the center of attention on the following pages.

3) Projects that require public contribution (so-called "warm works")

In the latter case, these are the projects whose revenues from users' fees are not sufficient to cover the costs of their realization, which is why the Public Administration is called upon to intervene through the payment of a public contribution, able to incentivize the participation of the private party, that otherwise would not find it economically convenient to take part in.

This distinction represents in any case a simplification of what is commonly found in practice, since it is possible to find typically cold works made with financial schemes similar to those used for hot ones. These are usually the examples of economic infrastructure, like highway or utility objects, that under normal conditions are of high commercial interest for the private party, but which due to some external/market reasons (long distance from busy, commercially attractive hubs) or social one (public importance of a highway connecting underdeveloped region at the outskirts with another, more advanced city center) look less appealing to private investor and, thus, need the government's integration to ensure private party profitability. This is exactly what is happening nowadays in the highway construction industry in Russia, for example: if not all, but the majority of appetizing road concession projects have been taken by the private companies, that is why government should come up with some mechanisms to entice the private player into the remaining less profitable ones[11].

From a strictly financial point of view, there are various options to achieve the aim of creation of the infrastructure object in the health sector, even if historically, the instrument that was used first and with more success is that of project financing. A PPP operation can be carried out using different financing methods. The main ones are: project financing, which is also the most widely used, especially in operations such as DBFMO (Design build finance manage and operate) or BOT (Build operate and transfer); structured finance (corporate), which is generally used with the relatively small and inexpensive projects and in the project structure involving Design and Finance (DBF) or Operation and Maintenance (O & M); real estate leasing in construction (leasing immobiliare in costruendo), which is a particular form of financial leasing used in PPP projects internationally according to the Build Lease and Transfer scheme (BLT), also known as Project Leasing (Gatti 2008). These are alternative methods that have different impact on the definition of the agreements between the parties involved, especially for what concerns the distribution of the project related risks, and in particular those of construction, availability and demand.

[11] This comment was made during the plenary session "Conclusions, proposals and recommendations of the Russian PPP Week 2018".

Table 4 – PPP contracts and financial models

Type of contract	**Financial model**
OM	Project financing Corporate financing
BOT	Project financing Corporate financing
DBFO	Project financing Corporate financing
BLT	Financial leasing

Source: Vecchi 2013.

If we want to focus our attention on the health sector, we must remember the profound changes that the health care system is going through worldwide. The basic principles have been modified, which have led to a re-examination of the old functional and dimensional settings of the hospital facilities. Therefore, in the conditions of always higher requirements to the public infrastructure as well as growing expectations for the better and more efficient provision of public services in general, coupled with the growing government debt and constantly diminishing budgetary resources, the search of new forms of partnership with the private party for the provision of healthcare facilities and related to them services, became self-evident.

If we look at Italy, the reorganization of the hospital network is going hand in hand with the need to strike a balance between the role of the hospital and that of territorial services in health care in compliance with tight financial constraints. The medical care at the in-hospital level is the one that continues to absorb more economic resources in the health sector. Starting from 2012, a regulatory procedure was launched with the aim of defining measures to set standards of reference in terms of quality, structure, technology and quantity regarding hospital assistance. One of the first objectives the regions were required to reach is to reduce the availability of hospital beds, in particular of the care institutions accredited with regional health services. For the definition of these measures the following parameters were taken as a reference point: a maximum hospitalization rate of 160 per thousand inhabitants (of which 25 per cent, equal to the rate of 40 per thousand inhabitants, referring only to daytime admissions), a maximum overall level of the allocation of beds per thousand inhabitants equal to 3.7 (including 0.7 beds per thousand

inhabitants for rehabilitation and long-term post-acute care) and consequent re-adjustment of public hospital personnel. Besides the quantitative aspects, in general, the production platforms of the National Health System are undergoing profound changes in terms of quality. In almost all Italian regions, we are witnessing the rationalization of the offer, which is usually triggered by the reshaping of hospital services with changes that affect concentration of the case mix, the unification of the internal organizational structures, the reduction of physical points of access to hospital services. In such context, which is common to many countries, the project financing results to be a valid option, not only because of the financial benefits produced by the inflow of private capital, but also because it allows to generate positive effects on the timing of completion of the infrastructure object as well as its efficiency.

The development of a PPP operation in the healthcare sector through project financing requires assessment of the convenience of this tool both by the administration and by the private operator. The latter generally intervenes in the operation both to provide for the construction of the hospital structure and for the management of some services (exclusively no-core), leaving management of exclusively medical/hospital related services to the healthcare company. The latter recognizes two types of fees to be paid to the private concessionaire: one for the construction and one for the management, with which it remunerates the availability of the structure, its quality and the volume of the services provided. In order for the PPP operation to be properly concluded, the payments envisaged by the public administration must reflect the distribution of risks and responsibilities between public and private partner. This kind of operation through project financing must be structured in such a way as to render effective the transfer of economic and financial risks to the private sector. Another aspect that appears to be crucial, as for example emerges from the British experience, the leader in implementing of such projects, is the regulatory framework.

2.1 Project Financing

From a financial point of view, or to be more precise, from the financial instruments' to be used point of view, there are different ways of accomplishing infrastructural works through PPP operations. The most widespread tool is Project financing, which represents one of the alternatives within the broader framework and range of possibilities offered by structured finance (Albisetti 2000). Healthcare infrastructure also can be financed in many different and competing ways, and Public Private Partnership and project financing techniques are increasingly recognized as a useful and appropriate device (Visconti 2013). Just like the project management is the "glue" that unites

different (designing, engineering, constructing, financial, economic, technical, management, to name just a few) skills and competences necessary for the project to function as a single harmonious unit, project finance is the "glue" uniting and holding together the interests of such apparently different parties as the government, private company and financing institution, each of them with a definite allocated for it portion of risk to bear.

Without dwelling too much on the rather ancient origins of this financing technique (Kensinger and Martin 1988), project financing consists in the financing of an investment project or of a particular economic unit (Fabozzi and Nevitt 2000), whose evaluation by the lenders is based on its ability to generate, during management and operation phase, sufficient cash flows to repay the debts contracted for its realization and to remunerate the risk capital (Gatti 2008; Finnerty 1996). The difference between this method of financing and the more traditional corporate finance one emerges immediately. In corporate finance at the center of the financing transaction there is the company in its entirety, and creditworthiness is linked to the applicant as a whole and not to a particular project to be carried out. Moreover, "accountingly" speaking, such financing should be written on the company's balance and, therefore, would affect the financial/equity structure of the company. While, in project financing the loan is destined to create an autonomous project with respect to the company's activities, which is why there is a clear separation between the assets of the subject (or subjects) who put the operation into being and the project itself. Moreover, in this case, unlike the corporate finance, all the costs related to the project are accounted for off balance. This separation, both legal and economic, is determined by the creation by the promoters of the initiative, usually referred to as sponsors, of a project company, Special Purpose Vehicle (SPV). The evaluation by the lenders is based almost exclusively on the goodness of the project and, therefore, the main guarantee is the ability of the lender to generate cash flow, as lenders can not claim the refund in case of project failure to the promoters (non-recourse financing).

What are the advantages and disadvantages of project financing operations then? The answer to this question depends on the perspective we look from. In the private sector's perspective, project financing represents one of the possible financing options, whose advantages are essentially financial and equity ones. More specifically, the sponsors and shareholders of the project company (SPV) can achieve two objectives:

1) The first concerns the debt contracted to finance the transaction, which, as mentioned above, remains outside of the balance sheet of the individual subjects, who in this way do not risk their assets and, above all, do not see their financial structure compromised.

2) The project is generally characterized by high levels of leverage and therefore by a high ratio between bank debt and equity capital. This ratio is usually 80/20 or 75/25, but it can also be

higher, allowing SPV shareholders to achieve higher levels of profitability compared to projects financed with a greater contribution of equity capital.

Though one of the potential research questions in the PPP agenda proposed by Wall et al. in 2009, was to investigate whether there is an optimal debt/equity ratio for PFI, nowadays, the proportion 20/80 has become almost a universal law for all the PPP operations, with some little deviations from the rule, based on the country's specific conditions. Comparing, for instance, the percentage of financial participation of the private party VS government financial support within PPP scheme in Russia and abroad (60-70% in Russia VS 80-90% abroad), according to a KPMG report, one immediately notices a more substantial role of a private counterpart in terms of capital bringing abroad (Shabashevich 2011). Even though the term "abroad" used in the report is quite misleading because of its too broad and general character. Thus, Italy knows quite a significant number of important PPP projects where government assistance results to be greater than reported 10-20% (sometimes even contradicting the national regulation on PPP). This difference, i.e. the higher equity to debt ratio, as compared to the developed countries with rich experience in PPP projects, can be explained by the requirement dictated by the financial institutions that need to have substantial level of guarantee for the provided financial resources in Russia. Therefore, the mix of equity and debt, being the essence of project finance operation, acts like a "glue" holding together the transaction and risk allocation (to which I'll come back later) among various partners (Grimsey and Lewis 2005).

If we take the public administration stance, the evaluation of a PPP operation is not limited solely to the financial aspects, which undoubtedly remain fundamental for its success. This refers to the fact that through the project financing tool the public administration can achieve other results as well:

1) Rationalization of investments: in order to avoid dispersing public resources in projects that are not able to guarantee certain and stable cash flows over time, the public administration in such a way is encouraged to define rationally, through serious and timely analyzes, the investments to be carried out by evaluating with particular attention not only their economic and financial sustainability, but also the cost / benefit for the community.
2) Limited use of resources by the public administration: these financing techniques allow fairly high debt / equity ratios; moreover, in many cases, the Public Administration does not participate directly in the capital, leaving the private party the task of finding all the necessary resources.

3) Certainty about costs and time of the investment: in principle, the presence of a contract for the supply of turnkey project at a closed price should encourage the private sector to

work with maximum efficiency both during the construction and management phase, so as to avoid extra costs (for example due to delays in construction) that could jeopardize the project's ability to repay bank debt and to reward shareholders.

4) Performance optimization: this is done thanks to the involvement of industrial and financial subjects, who, being motivated with appropriate incentives, are interested in giving their contribution to reach the objectives of the project as well as its successful completion.

5) Distribution of risks among the involved subjects: the risk assessment process makes it possible to carry out distribution of the commitments among all the subjects involved in the project in order to balance the weight between assumed risks and expected benefits; in particular, the Public Administration should bear those risks that are not directly managed by other parties.

6) Greater involvement of lenders in the success of the initiative: the fact that the guarantee for the financers is represented by the cash flows generated by the project, constitutes an element of strength and protection for the public administration as, in case of problems, the financing banks will be the first to be interested in finding solutions useful for the success of the initiative; moreover, and for the same reason, the banks, before granting the loans, evaluate the project very meticulously.

7) Strong link between investments and implemented financial resources: with project financing, the strong correlation between investments made and necessary financial resources allows the public administration as well as other parties involved, to optimize the level of resources to be dedicated to single projects.

Among the critical elements in the adoption of a similar funding technique we find the following:

1) Complexity in identifying and allocating risks: the co-participation of several subjects with different objectives entails a rather long negotiation process, at the end of which the commercial and financial commitments are indicated within the contract.
2) Higher transaction costs: which depend on the difficulty of stipulating numerous contracts between the parties, that are able to reduce the levels of information asymmetry and opportunism.
3) Lengthening of the start-up times of the initiative: for the same reason indicated above, the start of the initiative can only take place after all the contracts have been signed, which depends on the complexity of the operation, especially as it regards the allocation of risks. In fact, it is the project financing arrangement, in particular, that makes the entire project

evaluation process within PPP framework prone to take an extensive period before reaching financial closure (Kurniawan et al. 2015).

4) Greater costs of structuring the transaction: generally, the costs to structure a project financing transaction are higher those for a traditional contract. Among such extra costs, for example, there are higher banking costs (for interests and commissions) linked to higher risk, higher insurance costs, as well as remuneration for management activities.
5) Rigidity of the contractual structure: considering that the repayment of financial debts depends on the project's cash flows and on the fulfillment of contractual obligations in a timely manner, and where the non-compliance with contract provisions leads to penalties. It is also critical that the project evaluation and negotiations between the public sector authority and the other stakeholders to be carried out in a timely manner.

Project financing operations, as mentioned above, involve various subjects taking part in the deal on different terms and with different purposes, whose participation is defined on the contractual level through a complex negotiation that aims to define roles, obligations and responsibilities of each. A determining element is represented, for example, by the correct assignment of risks, as a guarantee of an efficient and successful project. Division of risks defines the structure of the operation. Even if it is common to see subjects that play multiple roles at the same time, the subjects involved are formally the following:

a) The Sponsor. It is the subject that invests risk capital in the SPV, promoting the initiative and taking care of the search for funding. They represent a decisive element, since a good part of the trust that the other subjects involved put in the success of the project is based on the sponsors' ability to manage everything. Usually the sponsor is represented by a construction company, even if it is not infrequent to see also other subjects supporting them. The reason lies in the fact that generally, when dealing with infrastructural projects, the success of the operation is closely linked to the role of the construction company.
b) The project company or the Special Purpose Vehicle company (SPV). It is an autonomous enterprise, where from the legal point of view all the obligations and rights deriving from the project are centralized. It is a joint-stock company, which allows the implementation of the principle of separation from the project's financial and accounting point of view from other companies of other parties involved (the so-called Ring Fence Principle). The project company can be private or mixed, in case there is also the public administration participation. Regardless of this, risk capital and loans are allocated in this company.
c) The banks. As mentioned above, PF operations are characterized by high levels of indebtedness, which is why the bank is of a paramount importance, whose role is often not

limited to that of a mere lender, in the dual role of lender or investor (sponsor), but can also vary depending on the type of intermediary involved and its competences. Thus, the bank can also take on the role of advisor or organizer of the transaction (arranger). In the first case the bank can: assist the sponsors in promoting an initiative; assist the companies involved in a tender for obtaining a concession; support a private group in the preparation of the financial plan. The arranger has instead the task of attracting capital from other institutions, to which the project is being presented after having been adequately assessed by the arranger (due diligence).

d) The public administration. It is an essential component in project financing operations. Besides being the "steward of public interests", it has the power and authority to significantly influence the success of the project. In particular, the PA can intervene by modifying the regulatory framework, it also identifies and promotes projects that must be completed and, finally, contributes financially, both directly and indirectly, to the realization of the project. Since the realization of public works, especially of an infrastructural nature, generally requires the completion of a long bureaucratic process, the Public Administration plays a delicate and important role for its positive outcome, also to the extent that it is able to streamline administrative procedures and avoid the setbacks that can slow down or block project implementation (Comana 2003).

e) Multilateral, bilateral financial institutions, export credit agencies. These are subjects that are meant to promote investments worldwide. These include, for example, the World Bank, the European Investment Bank. They operate at an international or regional level and act as project co-financers, both by granting loans as well as through venture capital investments, but more often operating by providing guarantees for the implementation of strategic projects in countries with high political risks (see a scheme in Annex № 4).

2.2 Project Leasing and Corporate Finance

Before illustrating the characteristics of the project leasing it should be noted that this is a financial model that must however be kept separate from the already known Lease and affermage contracts used in all those contexts in which the private operator is invited to manage and operate certain structures and public services (for example water supply and sanitation) without making investments. Lease agreement arrangement involves a situation in which the private sponsor leases the public facilities for a definite period of time, for which he pays a rental fee to the government and is entitled to receive the cash flow for the infrastructure operation (Rebeiz 2012; Dewulf et al.

2012). This type of contracts (agreements) is therefore preferred (see World Bank / PPP / Agreements) in cases when:

- commercial debt and private equity are unavailable for water supply and sanitation;
- the awarding authority wants to combine private sector efficiency with public financing;
- greater commercial risk as compared to the management contract should be passed to the private operator, with appropriate incentives to perform (see World Bank / PPP / Agreements).

As noticed by Dewulf et al., though, this form of private sector involvement into the infrastructure provision is less desirable, since under leasing agreement the private party usually doesn't have responsibility to invest into capital structures or replace infrastructure assets, while new capital investments are considered essential for infrastructure provision (Dewulf et al. 2012).

Let us dwell upon the financial model of project leasing, which represents, as Bull points out, a combination of project finance and financial leasing, where the subject of a project (an infrastructure object for example) is rented out basing on the evaluation of its potential financial flows estimated by the bank (Bull 1995). In the BLT (or BOLT, see Shukla et al. 2014) PPP schemes, there are generally three subjects that intervene: the public administration (public entity), the company building the asset and the leasing company. The public administration (lessee) assumes the role of a client, and once completed and tested, the work will come into its possession upon payment of a periodic fee to the leasing company (lessor), which had previously bought the work from the construction company. The leasing company and the construction company can act separately or, as in the Italian case, this operation, from the legal point of view, can be structured through a concession with ATI (temporary business association) established between the leasing company and the constructor.

It is a tool that is becoming always more attractive for the public administration dealing with the construction of turnkey structures, as an alternative to the PF or the traditional procurement procedure that are often financed with loans. If we have a look at Italy, at least until 2007 the regulatory framework made it practically impossible to use both the bank loan instrument to finance infrastructure projects with the traditional public provision contract system (mainly due to the constraints in terms of significantly long duration of the loan and important amounts to be financed), as well as that of real estate leasing in construction (leasing immobiliare in costruendo) (Felicetti 2007). As for the latter, in the last few years its use has undergone considerable progress due to changes in the regulation framework (see Vecchi and Hellowell 2013).

The leasing tool makes it possible to identify a pool of subjects who the responsibility to finance the work can be transferred to, as well as to realize it on time and within certain cost limits

Therefore, these subjects (leasing companies and constructors) assume, or should assume, the risks of construction and availability of the asset. Real estate financial leasing is particularly useful for the construction of so-called cold works, i.e. those intended for direct use by the public administration for the management of public services and in which the private sector can or can not find space for the management of certain services and where the tariffs should be necessarily integrated by the public contributions. Thus, for example, in the hospitals the concessionaire (ATI) could be interested in the management of non-medical services (canteen, cleaning, etc.), while in other types of structures (for example, public offices) the management aspect is minimal or even absent. In the first case, the concessionaire receives a fee which besides covering the cost of infrastructure object, maintenance costs, financial charges and profit, would also include a corresponding sum (price) for the management of the services. Moreover, these are generally objects whose residual commercial value at the end of the contract is higher than it was established by the Public Administration for its redemption. This is the main guarantee for the private entity, since the public administration is interested in becoming the owner of the structure.

Another advantage of this procedure, the one in terms of accounting, should also be considered. It is possible to account for lease payments as the management costs by using the equity method and, therefore, not impacting the indebtedness of the public administration (off balance accounting). It is true, though, only in case if the risks of the operation are actually born by the private party (Vecchi and Leone 2016). This is probably one of the biggest obstacles for the operations structured in this way to spread, since it has been shown that in practice the sharing of risks between the public and private sectors is often made to the advantage of the latter. So in many contracts there is lack of adequate transfer both of construction and availability risks. It is also true that, as claimed by Vecchi and Hellowell up to now the increase in the demand for "lease contracts" was mainly due to accounting consideration, while the transfer of risks, which is the main lever to create value, played a marginal role (Vecchi and Hellowell 2012)

An element that should not be underestimated in leasing is the presence of the bank (leasing company) within the Temporary Business Association (ATI in it.). On the one hand, it guarantees the financial viability or bankability of the work, an aspect that presents critical element in the operations of PF, and at the same time offers greater guarantees to the public administration regarding the choice of the construction company. Although the financial viability of the work depends on the creditworthiness of the public administration, the leasing company carefully evaluates the constructor partner as well. A negative aspect, which is valid for Italy, is represented by the limited number of leasing companies able to guarantee adequate availability to projects in terms of capital (Norsa and Trabucco 2012). As noted by Vecchi and Hellowell “the limited number of companies active in the public sector contracting market has further reduced the

opportunity to structure lease-based PPPs" (Vecchi and Hellowell 2012). So far, leasing companies have proven to be rather resistant to accepting a complete transfer of risks to them and to the introduction of contractual clauses relating to the application of penalties on the leasing fee in the event of non-compliance by the private operator (Vecchi and Hellowell 2012).

In structuring a PPP operation financed by project leasing, attention must therefore be paid to the following aspects:

1) transfer of construction and availability risks, ensuring that ATI is obliged to guarantee the final design, construction, financing (leasing) and subsequent maintenance of the work.

2) provision of penalties that, in the event of inadequate availability or usability of the asset, allows the reduction of the lease payment in order to transfer the risk of availability on the private partner.

Turning to a third type of possible infrastructure facility financing, a corporate finance method should be mentioned. A structured loan is generally a medium-long term loan defined on the basis of specific characteristics of the project. Although project financing and leasing represent a sub-category of structured finance, usually the structured finance is referred to when a private operator (individually or in ATI) collects debt capital to finance a PPP operation. In most cases, debt capital does not finance more than 50% of the value of the project initiative and the cost of capital is quoted with reference to the creditworthiness of the private operator. Unlike project financing, which provides for an off-balance accounting of a loan for the private party (a different entity represented by the SPV is financed), in the corporate loan the new initiative falls within the budget (on-balance) of the private company (manufacturer). If we look at the situation from the perspective of the subject called to finance the project (the bank), the assessment not only of the project and its ability to generate cash flows is made, but a comprehensive evaluation of the company together with the project should be performed. Therefore, all the elements useful for evaluating the repayment capacity of the company will be taken into consideration, starting from the analysis of its equity, economic and financial situation. The bank will be able, therefore, to rely on a much wider guarantee base than the one considered in the case of project financing, where the assets of the project are in fact the only existing guarantee.

Table 5 – Main differences between corporate finance and project finance

Factor	Corporate Finance	Project Finance
Guarantees for Financing	Assets of Borrower	Project Assets
Effect on Financial Elasticity	Reduction of financial elasticity for Borrower	No, or heavily reduced effect on sponsors
Accounting Treatment	On-balance Sheet	Off-balance Sheet
Main variables underlying the granting of financing	Customer Relations	Future Cash flows
	Solidity of balance sheet	
	Profitability	
Degree of Leverage Utilized	Depends on effect on borrowers balance sheet	Depends on cash flows generated by the projected. Leverage usually higher

Source: Gatti 2017.

3. Economic and financial evaluation of a project finance operation

Economic and financial plan, being the backbone of any investment project, also represents the soul of the PPP undertaking. The main aim of the economic and financial plan can be defined as making economic and financial assumptions in order to predict project performance (Kurniawan et al. 2015). Generally, financial models serve for more than one objective: they are used to calculate the future financial revenue, on which the general affordability of the project will be evaluated, they are the tools to win bids, and they also assist in the risk sharing negotiation between

government authority and sponsors. Therefore, financial model is used to reconcile the manifold interests of different PPP stakeholders. A well-drawn up and complete financial model, is also said to help the government to draft out the best scheme for the better satisfaction of public interest while developing policies and negotiating with sponsors (Chang and Chen 2001).

On the basis of the data presented in the feasibility study of a project financing operation, the evaluation of the following issues must be carried out:

a) economic convenience, understood as the ability of the project to generate an adequate level of profitability with respect to invested capital.

b) financial sustainability, understood as the ability of the project to generate sufficient financial flows to repay the debt and to adequately remunerate equity capital.

a) Economic convenience

In order to evaluate economic convenience, first of all it is necessary to determine and define the project cash flows, that are monetary income and expenditure generated as a result of the realization, management and disposal of a given investment, over the reference period assumed as the life of the project. First of all, it is necessary to calculate Free Cash Flow to Firm (FCFF), that is a pre-debt, after-tax cash flow that measures the cash generated by a project for all claim holders in the firm, after reinvestment needs have been met, in other words, starting from EBIT (net of taxes) adding all noncash expenses (depreciation and amortization) subtracting all capital expenditures and taking into account the net effect of change in noncash working capital. Free Cash Flow to Firm is also known as Unlevered Cash Flow because it excludes the impact of servicing the debt.

The economic convenience of an investment project can be assessed through the application of some indicators, among which the most used are Net Present Value (NPV), Internal Rate of Return (IRR) and Payback Period.

NPV represents the algebraic sum of all the discounted cash flows generated by the investment project. A positive NPV indicates the ability of the project to free enough flows to cover the initial outlay, to remunerate the capital employed and to leave residual resources.

$$NPV = \sum_{t=1}^{n} \frac{FCFF_t}{(1+i)^t}$$

Where:

FCFF= Free Cash Flow to the Firm

i=discount rate

A very important element for the calculation of the NPV is represented by the cost of financial resources, which, as is known, is related to the type of capital used to finance the project. So we have two costs: that of debt capital and that of venture capital. The cost of financial resources (or simply the cost of capital), also called WACC, is the weighted average between the cost of debt (net of tax) and the cost of equity, weighed for their respective percentages in the structure of capital.

$$WACC= (E/V)*Re+(D/V)*Rd*(1-T)$$

Where:
E= Equity
D= Debt
V= Total capital
E/V= % of capital that is equity
D/V= % of capital that is debt
Re= Cost of equity
Rd=Cost of debt
T= Tax rate

Weighted average cost of capital represents the key financial risk parameter. Regarding the cost of debt, the average interest rate applied to the financing instruments used for the project is generally employed (so it is the rate agreed upon contractually and quite easily identifiable). On the other hand, the cost of equity appears to be more complex, i.e. the remuneration expected by shareholders, which can be expressed as the average return expected by shareholders for an investment project of equal risk and with the same characteristics as the planned one. Among the numerous models developed for the calculation of the cost of equity, the most used model is based on the equilibrium theory of the capital market and it is the Capital Asset Pricing Model (CAPM).

$$Re=Rf+\beta*(Rm-Rf)$$

Where
Rf= risk-free rate
β= equity beta
Rm= annual return of the market

This model, for which I advise to consult the extensive existing literature on the subject, also for the most problematic aspects, assumes that the expected return of each security is equal to the sum of the risk-free rate and the market risk premium multiplied by the coefficient Beta, a parameter that measures the non-diversifiable risk of the investment and depends on the sector of activity, the degree of operating leverage (ratio between fixed and variable costs) and the degree of financial leverage (ratio between equity and debt). In the case of investment projects, the estimate of the Beta presents many problems, since it is difficult to find comparable companies (only a few project companies are listed).

IRR: The internal rate of return is the rate that makes NPV of a project null, that is, the rate that makes the present value of incoming cash flows equal to the present value of outgoing cash flows.

$$0 = \text{NPV} = \sum_{t=1}^{n} \frac{\text{FCFF}_t}{(1+\text{IRR})^t}$$

The IRR is therefore the limit rate above which there is no convenience in obtaining funding for the project. By evaluating an investment through the analysis of IRR, it will be decided to implement it only if its value is higher than the estimated cost of the invested capital. In this case, the NPV will also be positive.

However, the economic advantage of the project must also be assessed from the point of view of the members of the project company, in order to determine the level of profitability of the capital they invested. In this case, both the NPV and the IRR must be calculated on the cash flows attributable to the shareholders and the discount rate used will only express the opportunity cost of the risk capital. In this case the incoming and outgoing cash flows to be taken into consideration are different from those used in the evaluation of the project tout-court. Outgoing cash flows are represented by monetary payments of share capital, while incoming cash flows are almost exclusively represented by the received dividends and by any cash surplus resulting at the end of the valuation period.

$$\text{NPV}_{\text{equity}} = \sum_{t=1}^{n} \frac{\text{ECF}_t}{(1+i)^t}$$

Where:

ECF=Equity cash flow

i = Re (cost of equity)

The positive NPV_{equity} indicates that the project is able to generate major returns for the shareholders compared to the resources invested into the initiative. With the same elements it will be possible to proceed with the IRR calculation of the equity.

$$0 = NPV_{equity} = \sum_{t=1}^{n} \frac{ECF_t}{(1+IRR_{Equity})^t}$$

b) Financial sustainability

Not all economically viable projects as outlined above are also sustainable from a financial point of view. Financial sustainability implies the ability of the project to generate sufficient cash flows to guarantee the timely repayment of loans and adequate profitability for shareholders. In short, the incoming cash flows (operational, deriving from management) must be such as to cover, in terms of amount and timing, the outgoing (operating) cash flows. A very important element for the assessment of financial sustainability is represented by the financial structure of the project, i.e. the debt/capital ratio chosen to support the initiative.

To assess financial sustainability, once the capital structure of the SPV has been chosen and cash flows are calculated, one should proceed to the coverage ratios calculation. These are indicators used by banks to assess which safety margins they have over the life of the project compared to the vehicle company's ability to pay the debt service. The main indicators used by banks are the Debt Service Cover ratio (DSCR) and the Loan Life Cover Ratio (LLCR).

The DSCR is equal to the ratio, calculated for each year of operating life of the project, between the cash flow available for debt service (CADS) and the debt service (interests, fees and debt repayment).

$$DSCR=\frac{CFADS_t}{(I+K)_t}$$

Where:

CFADS= Cash flow available for debt service

I=Payment on the principal

K= Interest payment

The sustainability of the debt service in each period will be assured when the DSCR> 1, i.e. when the operating cash flows are able to cover the payment of principal and interest to the lenders. This quotient must be strictly greater than 1, since mere equality to 1 would determine an unsustainable situation for both lenders and sponsors. In this case, in fact, the project would be

able to cover the debt service, but not ensuring a dividend flow for shareholders would make the solvency of the SPV precarious. On an operational level and to guarantee an adequate safety marginы, banks positively evaluate projects whose DSCR stands between 1.4 and 1.6, depending on the type of project (sector, innovation, risk). Average Debt Service Cover Ratio (ADSCR) is the average value of DSCR of each year.

The LLCR is the coefficient between the discounted sum of the operating cash flows, including between the valuation instant (s) and the last year envisaged for the repayment of loan (s + n), increased by the debt reserve, and the residual debt considered at the same time instant (s):

$$\text{LLCR}=\frac{\sum_{t=s}^{s+n}\frac{\text{CFADS}_t}{(1+i)^t}}{O_t}+\text{DR}$$

Where:

s=moment of valuation

s+n=last scheduled year of debt repayment

DR= debt reserve

O= outstanding debt

The numerator of the LLCR represents the current value of the project's operating flows on which lenders could retaliate if they demand immediate repayment of the residual debt. Also for this coefficient, if the value is higher than 1, the lenders feel protected, otherwise not, and, like for the DSCR, a higher value is always required.

Finally, one element that is always taken into consideration is the leverage of the project, i.e. the ratio between debt capital and equity, as the capital providers tend to define maximum levels of leverage depending on (inverse relation) the riskiness of the project itself.

C) Sensitivity analysis

Once the financial plan has been drawn up and profitability and financial sustainability of the project assessed, bearing in mind that these calculations have been made on the basis of some hypotheses within the situation characterized by uncertainty, it is advisable to proceed with a sensitivity analysis, i.e. simulations which will help to understand the impact on the project of any eventual change in the input data of the base scenario. In a nutshell, it is a series of tests that are able to tell how the project will react to changing hypotheses and, therefore, whether it will still be sustainable even under conditions different from those initially imagined. It is basically a matter of going to vary the values of some key inputs or variables (drivers) already included in the base scenario with which the financial plan was built (Borgonovo-Peccati 2004, Woodward 1995).

On an operational level it is not a complex task, since, with the simple modification of some initial data, many alternative scenarios could be generated. However, this does not mean that we should proceed in this direction and produce one thousand scenarios - usually the sensitivity analyzes performed by the bank (advisor) focuses on the variation of a small number of drivers (Gatti, 2005). First of all, we will focus on the relevant variables, i.e. those whose modification can have a significant impact on cash flows. Therefore, generally these variables are those that affect the operational management, such as sales revenues or operating costs (just think of inflation).

The sensitivity analysis does not have the aim of defining the probability of the occurrence of a given event, but serves to evaluate the maximum variation of a key variable, beyond which the bankability coefficients (DSCR) are no longer respected. It is then up to lenders to assess whether this change can be considered more or less probable, based on their risk appetite. Another element to be taken into consideration is the one related to time, that is when the event that changes the results of the project occurs: it seems obvious to note that the sooner this event occurs, the greater will be the effects on the project.

Generally, after having worked out the basic scenario (base case), this is accompanied by an improvement (best case) and a pejorative (worst case) hypothesis. If one should want to introduce the probability of the occurrence of each scenario, it is possible to develop advanced versions of the indicators, including the NPV and the IRR: a frequently used system is that of simulations with the Montecarlo method (Pompella 2006). In the specific case of healthcare infrastructure building, the variables that are generally used to test the project are the following: cost of the investment, construction period, rates for health services and their variation over time, personnel costs, the cost of medicines, health and non-health products and services. The construction of the scenarios will clearly depend on the contractual structure, with particular reference to the distribution of risks between the SPV and the public administration.

4. Risk management and risk allocation in PPP

Risk is a very short four-letter word, but it covers a very wide spectrum of different and specific issues of relevant significance for many knowledge fields and economic industries. To give a comprehensive review of risk associated with PPPs has been the main objective of many works, that studied risks from different sectors', countries', types' and dimensions' angles (Li et al. 2005; Grimsey and Lewis 2002; Nisar 2007; Thomas et al. 2013). Therefore, it is by no means

the aim of this work. I would rather focus on systemizing and throwing some light on risk management process within a narrower PPP in the healthcare sector framework and when the private partner is a foreign company. The importance of deep theoretical and practical study of risk management process in PPP projects becomes obvious when we consider and put together two things. First, the proper risk allocation is the cornerstone of whole PPP logics. Secondly, risk management process in itself is a complicated discipline consisting of multiple elements and considerations to be taken by the decision makers in any field of knowledge and industry. The combination of a complex process, as the risk management together with such a multifaceted tool, as the PPP is, speaks clearly about the relevance and necessity of deeper study of risk management techniques applied specifically to the PPP projects.

Before getting down to deciphering risks as far as its behavior within PPP framework is concerned, it should be noted that risks emerge in all kinds of projects, implemented either through PPP or through conventional public procurement method. There exists erroneous belief that when provided by the public sector, it is the public authority who assumes all the risks, while in reality they are simply passed to customers and taxpayers, i.e. the public (Nwangwu 2016). There is also a unanimous agreement, this time not erroneous, on the fact that one of the distinguishing characteristics of the PPP is its high level of risks and, consequently, the complex process of risk assessment and management. Risk management has always been an integral part of any project management routine, but the realization of its fundamental and central role within the project, together with risk awareness in general, has come only within the PPP framework. This fact, being also a typical PPP feature, is usually explained by a big number of participants, everybody with its diverse aims and interests, the necessity to coordinate different but interrelated activities and skills, long concession period, large scale socially sensitive objects being implemented and significant capital investments involved, which all together witnesses an intricate link between PPP and risk.

The complexity of risks assessment and their management in a PPP project derives from the complexity of the procurement process itself, considering also the innovative character of PPP procurement approach. The uncertainty of events of the PPP long-term concession period together with financial organization of the project add another element of complexity. If we further add a transnational, or in other words, foreign component, the overall picture becomes even more “risk concentrated”. Thus, Hastak and Shaked in proposing their own risk assessment model for international construction projects, suggested to analyze risk from three separate dimensions – macro (country), market and project (Hastak and Shaked 2000), which in fact is already being implemented in PPP projects, where different components of macro, market and project related risks are analyzed separately, usually with the help of the risk matrix tool.

That is why for the project to be successful, an appropriate and systematic risk assessment and management should be understood in a very broad sense and performed at all the levels, at all stages and on continuous basis (Marques and Berg 2010). Only such a "holistic" approach allows an early detection of risks and encourages the PFI stakeholders to identify, analyze, quantify, to take appropriate measures and mitigate them in time, thus ensuring the best risk project management practice (Akbiyikli and Eaton 2005; Chapman and Ward 2004). After all, risk management is not about predicting the future, but understanding a project and making a better decision regarding the management of that project tomorrow (Smith 1999).

Risk Management within PPP can have a number of applications. Three of them are of particular relevance for this work. Firstly, risk management is an indispensable component while looking for the investments. Secondly, risk management is the foundation for risk distribution between the parties. Finally, risk management insights are of paramount importance during construction and operation of the project. Of course, risk management is not a panacea, but it is a great source of information to help in taking the right decision. For risk management to function well during the whole project life cycle it's important to dedicate it due attention at the pre-project stage. The failure of the larger half of all PPP projects is exactly due to the miscalculations and errors committed at the preparatory, pre-project stage.

A fundamental aspect in PPP operations, and in particular project financing, concerns identification, analysis and allocation of risks that the parties involved are called to bear, keeping in mind that it is a multiplicity of risks that should be managed jointly and simultaneously during all the phases of the project by all its participants: the literature also talks about multi-risk management. In fact, Robert and Chan, claiming that very few studies have examined the criteria necessary for assessing the success of PPP projects, undertook their work where they explored the understanding of different stakeholders' (public, private and academic sector) perception on success criteria for PPP projects (Robert and Chan 2017). The conclusion they arrived at was that effective risk management is the most critical success factor considered as such by all tree groups of stakeholders. Efficiency in risk management is the key success factor for any size project and in any industry. Risk efficiency, in turn, is defined as the minimum risk decision choice for a given level of expected performance (Chapman and Ward 2004). Risk management should also be proactive and followed by a vigilant implementation process in order to be called an excellent management plan (Rebeiz 2012).

Risk management process, together with the definition of a correct financial structure, represents a decisive point for the success of a project financing operation. In order to guarantee the interests of all the subjects involved in the operation, it is essential to identify the risks that will arise from it, to assess the impact on financial flows through a sensitivity analysis and to define

the most efficient ways to allocate those risks. The basic idea is that in a project finance operation the risks must be distributed among the participants of the operation according to their respective knowledge and abilities to manage them. It is therefore essential for risks to be appropriately identified, shared and transferred completely to the best party so that an effective risk management would be achieved (Roumboutsos and Anagnostopoulos 2008). While bearing in mind that some risks can be controlled or neutralized, it seems clear that their minimization can be achieved through their optimal allocation, which ultimately makes the incoming and outgoing cash flows deriving from the initiative less random. In principle, for example, the public administration should only manage the risks that the market is not able to assume. In this regard a very important topic and to which we will return in another part of the work concerns precisely the costs of transferring risks from the public entity to the private subject, as this is useful to understand whether the transaction structured in such a way (PPP with project financing) is able or not to create value (VfM).

The risk management process develops in five phases:

1) identification of risks that may affect the economic - financial plan

2) risk assessment, which defines the probability of the occurrence of a given event and the impact that it might have on the project

3) allocation of risk, where responsibilities and related costs are contractually divided between the parties involved

4) risk mitigation, the aim of which is to reduce the probability and the effects of the occurrence of adverse events

5) monitoring and review, with which not only the risks already identified are kept under observation, but also risks generated in the subsequent phases of the project are identified.

The very first step of any risk management process is identification of risk factors, both those related to the project itself, its inner characteristics, as well as exogenous factors resulting from external environment. The first group comprises such risk factors as duration, cost magnitude and financial structure of the project. It seems quite obvious, that large-scale projects with long-term horizons, as well as those requiring significant capital investment and big number of stakeholders with differing goals are riskier than projects of short duration, little capital expenditures and a couple of partners. High leveraged projects (with high debt-equity ratio), as well as those with long repayment schedules are more volatile, thus financially riskier, than those with a less leveraged structure and shorter time frame for paying off the debt. Shen et al. tells that such projects' complexity is further compounded by the specific character of the infrastructure users (Shen et al. 2006). Finally, the complexity/technological innovation content of the project

also determines the risk level, since well-established technology or system is less risky than something newly introduced and not tested enough.

As far as exogenous risk factors are concerned, these are variables belonging to the external ambient of the project, including political, geographical, economical and many others. In general terms, the rapidly changing environments are much riskier than stable or at least slowly moving ones, because the changes, be it in demographics or social trends, be it in regulatory framework or price increase or some technological innovation introduction create uncertainty and raise the level of unpredictability for the project (Rebeiz 2012). Unilateral policy change risk together with demand risk, for example, are regarded to be the most problematic ones in PPP infrastructure projects. Negative consequences they entail almost always lead to contract renegotiation (Marques and Berg 2010).

It is impossible to talk about risk management without giving a definition to the risk itself. Different people can have legitimately different perspectives on the same risk issues. Eaton defines risk as "a potential event, either internal or external to a project that, if it occurs, may cause the project to fail to meet one or more of its objectives" (Eaton 2003). Cox reminds that "risk" is not a measured attribute, but is derived from frequency and severity inputs through a priori specified formulas such as Risk = Frequency×Severity (Cox 2008). Chapman et al. propose to define risk in a restrictive manner, as "the possibility of adverse departures from expectations", suggesting that usage of simple practical concepts and tools will also ensure an appropriate not simplistic approach to the risk management process in, not simple at all projects (Chapman and Ward 2004). It will also in their opinion help to understand well what risks are involved in the project in order to be able to manage them aptly. Thus, understanding of risk as probabilistic change in project indicators, primarily related to income and expenditure, is not entirely correct, since only the negative hue of such a change should make the event dangerous and, eventually, be considered a risk (at least within PPP framework project).

There are also different criteria for classifying risks, and consequently various risk classifications: Jackson categorizes the risks into 6 broad groups –demand, design, construction and development, operating cost, performance and availability and residual value risk; Grimsey and Lewis outline at least nine risks potentially dangerous for the project - technical, construction, operating, revenue, financial, force majeure, regulatory/political, environmental and project default risks; Ng and Loosemore classifies PPP risk into two main groups – project and general risks; Maslova and Sokolov, for example, seeing the absence of precise classification as one of the flaws of the current approach to risk management, proposed their own classification, both general, based on objective and justified criteria to define the concept of risk in PPP project and another

classification typical only for healthcare PPP (Jackson 2004; Grimsey and Lewis 2002; Ng and Loosemore 2007; Maslova and Sokolov 2017). Theoretical elaboration of the medical risks of Maslova and Sokolov (risks inherent in PPP projects in healthcare) consisted in describing, classifying and proposing measures of their mitigation, can definitely be useful for creating an ordered and exhaustive mental framework of risks in such projects.

Each project has its unique risk profile, because it can be affected by various factors, starting from the PPP type and country where it is implemented, and finishing with the magnitude of the project and sphere it belongs to. Thus, the importance of each risk depends equally on the project itself, as well as contextual environment it belongs to. Ke et al., for example, mention such contextual issues as technical expertise available to the procuring authority, macroeconomic context law and judicial precedents (Ke et al. 2010). Risk profile of the project directly affects many important components of the PPP construction. Thus, there is direct relationship between risk profile of the project and the unitary charge (income paid by the public sector to the private party, concept introduced by Hellowell and Pollock, probably more known in the modern PPP application context as availability payment (Hellowell and Pollock 2009). It has been demonstrated by De Marco and Mangano that this unitary payment is not only affected by investment, operations, and financial life-cycle costs, but also by risk factors and the level of risk allocated to the private sponsors (De Marco and Mangano 2013). Since "there is no list of risks that is applicable to all PPP project and there is also no risk classification approach that is universally agreed to as best", I will provide here the most widely used and commonly accepted risk classifications (Kwak et al. 2009). A very common criterion is to distinguish them according to the subject that suffers from them or controls them. Thus, the risks external and internal to the company that implements the project are distinguished. Another widely used criterion, also because it is very intuitive, is the chronological one.

As for the first criterion, external risk can be controllable or uncontrollable. An uncontrollable risk generally affects the completion of the work. Among these risks we find, for example: the country risk, linked to the political-economic context; the risk of force majeure; the technological risk (collapse of the adopted technology, unexpected technological default); risk of definitive default of the counterparties. Among risks that can be controlled, even partially, we find: the interest rate risk, the exchange rate risk, the risk linked to the increase in prices (raw materials, labor), legal risk (general regulatory, tax or safety variations); market risk, related to changes in demand. Internal risk is always controllable and may depend on: errors in designing, errors in programming (project timing), planning errors (incorrect estimates of cash flows), technological defect (unsuitable technology).

As for the chronological criterion, it classifies the risks according to the phase of the project in which each risk presents itself. From this point of view, the phases are at least two, even though there may be further subdivisions. Thus, the following risks are usually identified:

a) risks of the construction phase

b) risks of the management phase

c) risks common to both phases

a) During the construction phase we find mainly industrial risks, whose impact on the project is very important as it has not yet begun to generate incoming cash flows. For this subset of risks there are more or less detailed classifications. Wishing to summarize we find the following types of risks:

1) Design and planning risks.

In project financing operations, it is essential to plan the time and resources needed to reach the final result. If errors are made at this stage, it is or because a part of the technical-operational design is not totally or partially achievable, or because the various activities are not planned in the correct way, this will require corrective actions which, causing delays, will necessarily imply costs. Coverage of these risks is generally difficult.

2) Technological risk

It could be considered a type of risk inherent in the design type of risks. It may arise on several occasions and may derive from the very origin or occurred in course because of inadequacy of the chosen technologies and/or machines used. When the technology is very innovative, the final result of the transaction presents high levels of uncertainty, which is why it is often difficult to find lenders, except in cases of full recourse structured transactions. On the other hand, when the chosen technology is mature, there is the risk that, between the time of planning and that of putting the work into operation, it becomes obsolete.

3) Risk of construction or completion.

It is the risk that, for some reason, the work is not completed or the construction is delayed. This risk can manifest itself in different ways:

- cost overruns: it is one of the crucial risks in project finance transactions and can concern raw materials or labor. It should not be confused with the risk of inflation, as sometimes the increase in costs can only be linked to market phenomena and unpredictable circumstances that modify the availability and therefore the price;
- unexpected costs: this is a risk similar to the previous one, but in this case the problem does not lie in the change in cost, but in the onset of a different type of cost from those initially assumed;
- delay in delivery of the working structure (delayed completion);
- completion of a structure with lower standards (performance deficiency);

- suspension of work due to physical risks or infliction of harm or damage to property or persons.

b) Main risks in the management phase are:

- risk of supplying necessary inputs for the current management of the implemented infrastructure, which may be compromised in quality or quantity and therefore may be non-compliant with its expected purpose and in any case generate higher costs;
- performance risk, which can occur at the time of final testing and during subsequent tests through a lower level of efficiency of the carried out plant or project in general and a consequent reduction of economic margins;
- risk of demand (or market), which is a crucial risk for the success of the transaction, as it affects the revenues of the project company (SPV). It occurs when the sales of products and services are lower in quantitative terms than those budgeted, or when their prices fall.

c) risks common to both phases

These are risks that exist throughout the life of the project finance operation. Several risks can be listed, but they can be grouped as follows:

- financial risks, which in turn include risks linked to changes in some factors, generally exogenous, such as:
    - the risk of inflation, when industrial and financial costs suffer an unexpected increase not followed by a corresponding increase in revenues
    - exchange rate risk, when, in the case of transnational projects, there are flows denominated in a currency other than that of the SPV, such as for example in the case of loans in foreign currency
    - interest rate risk, is linked to the practice followed in project finance operations to finance projects only at variable rates, taking into account the general unavailability of lenders to commit at fixed rates for long periods of time
- political risks, are linked to the stability (instability) of the countries and governments in which the work is carried out. They depend on the changes that occur as a result of the decision taken by the political authorities and may concern issues of a fiscal nature, or measures of industrial policy: just think of the withdrawal of concessions or expropriation and nationalization. Political risks are also known as country risk, which in turn, sometimes called a sovereign risk (Merna and Njiry 2002). Some authors differentiate political from country risk, pointing to the fact that the latter does not necessarily derive from government instability or from traumatic events, but from decisions that are taken for macroeconomic reasons, such as the introduction of duties or other protectionist measures aimed at defending the exchange rate. While other authors provide either a narrow (Hefferman 1986) or a broad (Nagy 1979) definition to a country risk.

- risks of force majeure, which include uncontrollable events and which include risks such as catastrophe (natural events, or even acts of terrorism) or other events capable of temporarily or permanently blocking the work;
- environmental risks, which are connected to the possibility that the constructed work generates negative externalities to the detriment of third parties.

Once identified, the risks must be assessed, i.e. they must be analyzed and measured in order to establish, on the one hand, what the consequences of the considered events may be and, on the other, to measure the potential losses deriving from them, by means of identifying the level of risk and the related probability of their occurrence. At this point in the risk management process, we can intervene in different ways to deal with risk and potential losses, depending on whether they are pure or speculative financial risks. Furthermore, it is possible to distinguish between behaviors aimed at minimizing risk effects (risk-facing) or behaviors aimed at facing risks with an active conduct aimed at managing risks themselves (risk handling).

After risks have been defined, identified, classified and assessed, they need to be appropriately distributed and shared among all the participants, able and willing to take the risks and best equipped to manage them. Significant risk transfer to the private party is a necessary condition for deriving full benefits from a PPP operation, besides private capital inflow and its better management abilities, from involving private sector into the initiative (Cangiano et al. 2004; Hodge 2004). The obscurity of risks facing PPP projects and complexity in distributing them appropriately have also been demonstrated in various studies (Ng and Loosemore 2007). Risk transfer mechanism is the heart of the PPP infrastructure procurement method, its unique feature and there are clear indications of its major significance for any PPP arrangement (Akintoye and Chinyio 2003; Ke et al. 2010).

Transfer of risks determines a major part of the forecast benefits arising from private financing of public infrastructure. Risk transfer does not eliminate the risks, but it reduces their economic cost. Hodge states that risk transfer can account for 60 percent of the total cost saving for the PPP projects (Hodge 2004). Different risks are differently perceived by different parties at different stages, that is absolutely normal and logical. What matters most is that all these parties at all the project stages should clearly understand all the risks inherent in the project they are involved in, in order to price the risks correctly and to achieve the best VfM for the taxpayers' money. As a matter of fact, the PPP should be justified on cost-efficiency grounds, in jargon VfM, the achievement of which is entirely dependent on risk allocation (Hodge 2004). The optimum allocation of risks between the parties, in particular the amount of risk charged to the private sponsors is of paramount importance while assessing and delivering VfM (HMT 2006).

Misallocation and incomplete transfer of risks in PPPs often end up increasing the total project cost and could also result in improper abrogation of contracts (Ameyaw and Chan 2015).

Typically, government authority and sponsors should arrive at mutual agreement and find a balance in risk sharing before reaching financial close to ensure the more possibly successful PPP completion. Negotiations of risk allocations should be concluded in a timely manner without significantly raising an already not cheap procurement method. By identifying and investigating specific risks prior to setting the cost for the project both parties are gaining value (Clifton and Duffield 2006). While negotiating the allocation of risks, both contracting parties should bear in mind the proposition for the successful PFI, proposed by Gallimore, stating that "the price of this risk transfer must not be so expensive that it prevents satisfaction of the criterion of value for the public money expended in rewarding the risk (Gallimore et al. 1997). In fact, thanks to flexible negotiation, an incentive to allocate risk on an agreed basis between the public sector and the private sector as well as competitive tendering, the PPP form of procurement is recognized as an effective way of delivering value-for-money for public infrastructure or services (Akintoye and Chinyio 2003).

Proper risk allocation can ensure higher efficiency and quality of services provision, previously associated with the state and, what is not less important, without raising their costs to the society as a whole (Sadka 2006). Appropriate risk transfer, studied from different perspectives (more often from the public perspective), the challenges and importance of developing the analyzing capacities, involved in assessing who bears PPP risks as well as the implications of limited risk transfer has been the topic of numerous studies and interest of various researches (Cangiano et al. 2004). Still, even nowadays, after numerous academic intentions to study risk issue from different perspectives, at different levels, and from different angles, the question of risk sharing, that constitutes the base for PPP, according to the recent study, is vague, as well as the question whether "risk sharing is appropriate, sufficient or optimum is open" (Hodge and Greve 2018).

Sharing of project risks between the parties is an obligatory condition of PPP relations. The search for the optimal allocation of risks is based on the specific nature of the PPP project, type of agreement, financing terms. The design model of PPP should necessarily take into account various risk factors. There not seem to be any doubts both among PPP academicians and operators that risks should be allocated to the party best equipped to handle them from both financial, cost effective and technical points of view, as well as the one willing, in other words having the right incentives, to manage them (Kwak et al. 2009; Grimsey and Lewis 2002; Chan et al. 2008; Akintoye and Chinyio 2003;). This common rule of risk sharing seems quite straightforward and even intuitive, though not so easily implemented in practice. Private investor tends to increase

income and is inclined to underestimate risks (direct dependence "risk-income"). The public body is inclined to overstate risks, as it seeks to reduce liability (the reverse dependence of "risk-income / liability"). The need to find the optimal distribution of risks predetermines the high importance of the pre-project stage of PPP in comparison with the classical state order. Loosemore and Teo even came up and formulated five key qualities the party bearing the risk should possess, that are awareness, mitigation and diversification opportunities, technical skills and resources, risk tolerance, compensation of risk (Loosemore and Teo 2000). This principle of risk transfer seems to be very well interiorized by the academic community and understood by the PPP operators, but it is still very often ignored in practice.

At times it is not easy to understand the rationale that stands behind decisions about risk allocation between private and public parties. Sometimes implementing even big PPP project, risk managers are guided more by intuition and very subjective, unsophisticated principles rather than deeply analyzed, calculated and objective factors (Akintoye and Chinyio 2001). Risk allocation mechanisms between private company and public entity continues to be unclear. Moreover, the widespread polemical assumption that that the risk/reward balance in PPP may be biased in favor of the private sector has been demonstrated by Hood et al. not to be a universal truth (Hood et al. 2006). The case analysis, undertaken in his research, showed that both the shareholder and the citizen require more light to be shed on PPP arrangements because of the weak and often opaque financial performance reporting systems, unable to guarantee the accountability transparency at both side of the PPP division (idem).

The importance of risk allocation is difficult to underestimate. The literature knows the examples of how misallocation and incomplete risk transfer led to the PPP project failure: Chan et al. have described how the Sydney Cross City Tunnel, which suffered significantly from the market and financial risks, was in the end reported to be an unsuccessful PPP project (Chan et al. 2008). Marques and Berg studying the water concession projects came to the conclusion that one of the major reasons for contract failure, expressed or as its renegotiation and/or early termination, is insufficient or flawed consideration of the risk (Marques and Berg 2010). Therefore, proper risk-sharing mechanism is at the base of successful PPP implementation. The appropriate risk-allocation is in the interests of all the parties, because it is what will eventually distinguish a successful project from the failure. Risk allocation is critical in PPP contracts because it reduces economic costs, it reduces the chances of contract renegotiation and ensures sound management of the project (Asenova 2010). Moreover, drawing contract in a way for it to manage and to address risks in a comprehensive way helps to avoid increased cost of infrastructure services.

Risks of a PPP project implementation could also be overcome, and, as the Japan sad experience in hospitals constructing with its rigid contract structure show, should absolutely be

managed by leveraging on the flexibility of PPP scheme (PwC 2010). The contract must allow for flexibility and permit renegotiation or revision of some terms, because the optimal allocation of risks is impossible at the zero stage of the project, since new factors can come in after the operation phase starts. Misallocation and incomplete transfer of risks in PPPs often end up increasing the total project cost and could also result in improper abrogation of contracts (Ameyaw and Chan 2015). Risk is a key issue in contracts with the private sector: an appropriate allocation of risks is a necessary condition for successful contracts.

The before mentioned assumption holds true for both economic and social infrastructure, because commercial risk is equally important for the road construction and for the hospital implementation project, even though the risk profiles of these two types of projects as well as the process of risk mitigation differ substantially. Thus, traffic revenue risk has been identified as one of the most critical risks impacting the commercial success of road projects delivered by a PPP (Singh and Kalidindi 2006). Social project, be it healthcare facility or educational institute doesn't face the traffic revenue risk, in particular, as the motorway project does, but the general revenue risk and its mitigation is still an important component that should be taken into consideration and correctly managed by all the partners. Healthcare infrastructure being typically high risk investment undertaking, requires even a more rigorous process of risk management, accurate risk identification, attentive analysis of risks and appropriate risk transfer mechanism.

There is a couple of methods of overcoming this risk in infrastructure project in general: from annuity-based BOT model, and shadow-toll DBFO one to performance based DBFO system, where the payment is adjusted to the operational performance and the quality of service provision of the contractor, rather than the actual usage of the constructed object (Chan et al. 2008). Though talking about social infrastructure project, healthcare infrastructure facilities, to be more exact, the regular fixed payment approach, also known as availability payment, works well and is the one most widely used. This payment made by the public client, which thus undertakes its fair share of risk, usually requires the concessionaire to achieve certain milestones and standards previously outlined by the government partner in the contract. It has been demonstrated that the economic and political environment, the hospital capacity, the construction duration, and the concession period are significant factors of the price paid by the granting authority (De Marco and Mangano 2013). Therefore, the amount of availability payment provided by the government to the private party for taking risks can be virtually equalized to the amount of risk transferred to the SPV. Furthermore, this payment is an important component of the cash flow used to determine the expected rate of return of a PPP investment.

It is thought to be fair for the socially responsible government to take on the revenue risk in the large scale, socially important and highly sensitive due to the involvement of taxpayer's

money decided by government, projects such as the hospital, for example. Thus, the core market risk, such as demand for health services are typically born by the public party, while other key risks, such as those related to construction and management of commercial activities, are typically transferred to the private part, being usually a private entity (Visconti 2013). Ideally, political, economic and social risks which obviously go beyond the capability of the private investor have to be retained by the public partner. Chan et al. also underline the importance of government role in providing the needed assistance as well as its vigilant eye on not permitting the private party in search of major financial benefits to take up too big proportions of the risks and, ultimately, being unable to manage them, leading in the end to the project's failure and the government having to rescue it wasting taxpayers' money and smearing its reputation (Chan et al. 2008).

Other project's risks, such as those associated with the design, construction, operation, maintenance and completion are generally always taken by the concessionaire regardless whether it is economic or social infrastructure undertaking. By assuming construction risk, for example, the private sector in such a way is better incentivized to reduce cost overruns as well as project delays, by which public works are very often characterized. While, the payment mechanism of PPP scheme, providing for the remuneration of the private party only once the facility is completed and is operational, incentivizes the concessionaire to finish works on time and within budget. Generally speaking, the private party is often believed to have more expertise and, within PPP framework in particular, more incentives, when it comes to risk management issues. Such an allocation of risks to a more skillful and capable to manage them partner ensures one of the key features and strengths of a PPP method, i.e. higher quality, as well as lower cost of the final project. On the latter, though, sceptics often cast doubt, alleging to the fact that the private party usually charges an expensive price for assuming the risk. However, risk allocation is never a zero-sum game for any of the party in a PPP operation.

There are also types of risks (force majeure, legal risks, country risk), that due to their nature and origin must be managed by both partners, and which sometimes create dilemma for the public authority since neither part has control over them (Lissauer and Robinson 2001). Other risks are directly transferred to the final customer (introduction of a new tax, for instance), in order to avoid time-and money-consuming contract negotiation and associated with it opportunistic behavior (Williamson 1979). It is also advisable for the public party to mitigate or "to take back some elements" of some risks which have been previously allocated to the private partner when doing so has "social, political or commercial sense" (Nwangwu 2006).

Consideration, management and mitigation of risks are essential elements for the correct stability and planning of financial flows and are generally summarized in the so-called risk matrix that highlights the type of risk and the subject by which the risk is borne. A risk matrix is actually

a table where different levels of "probability" and several categories of "severity" of the risk are mapped, with the corresponding recommended level of priority or management action for a definite risk (Cox 2008). It is, if done well, a kind of qualitative rating perfectly representing underlying quantitative risks. The risk matrix is an indispensable part of any investment package that can be applied either for risk classification, or, when possible for their measuring, as well as for allocating risk evenly between all the partners involved. Its usefulness is appreciated by the PPP practitioners on different project stages: it is helpful from the project conception stage till and during the contract negotiations. It is extensively adopted in risk management contexts and widely endorsed for risk assessing and analyzing in a broad array of industries and different countries. It is a kind of a checklist used to ensure that all risks are considered and accounted for or a useful summary of all the risk dealt with in the contact (Nwangwu 2016).

One of the elements rendering risk matrix popular is definitely its visual appeal (colored grids coding language) and simplicity (relatively simple inputs and outputs) that facilitates understanding and contributes to effective communication between various stakeholders, as well as provides relatively easy summarized contents for policymakers. Risk matrices have been widely recognized for their clear framework allowing for effective systematic risk review and representing a convenient foundation for risk sharing and priority setting. Many risk matrix practitioners and advocates also point out to the opportunity to use risk matrix as a socializing tool for teaching "risk culture" concepts at different levels of the organization without requiring special expertise in quantitative risk assessment methods or data analysis from the employees (Cox 2008).

These advantages though, in some authors' points of view, fade away when put against the "inconsistencies and arbitrariness embedded in RMs". Thus, Thomas et al. claim that the "scoring systems and scales used in risk matrices do nothing but distort information and remove the proportionality of input data" (Thomas et al. 2013, p.63). The authors argue against using of risk matrices in risk-various management contexts, because of its numerous inherent inconsistencies and arbitrariness, which seem to obscure the decision making process rather than enlighten it (Thomas et al. 2013). Cox, examining some mathematical properties of risk matrices as sources of information for risk management decision making and priority setting showed their logical and mathematical limitations. In addition, little research rigorously validating the performance of risk matrices in actually improving risk management decisions, was claimed by the author (Cox 2008).

Since there is no an internationally established and recognized practice in risk evaluation or any fixed, commonly accepted approach either for PPP projects or for project finance, these practices remain highly dependable on a unique set of characteristics typical of a definite project implemented within particular country economic and legal conditions. Some countries' national and international standards have included recommendations for the use of risk matrices for priority

setting and resource allocation, but this issue remains more the competence of a separate jurisdiction responsible for defining particular project requisites and tender rules. This is probably a positive trend, because unification of the risk management standards can be useful, and possible only to a certain extent, but it shouldn't become too rigid, because, considered PPP multifacetedness, standardized solutions will not work, and even hamper the project execution, especially the big scale ones.

Despite some voices of critique against qualitative risk assessment methods and accusations of being unreliable and poorly performing (Cox et al. 2005), risk matrices can be and, in fact, remain the main instrument used by PPP practitioners. Considering subjective judgements and arbitrary decisions that categorizing and aggregating various risk events might imply, and inconsistency that decisions on risk management in general involve, the risk matrix is highly advised to be applied with caution, supplying careful explanations and providing justified judgements for each shared risk and its consequences for the bearing it party. An application of risk matrix in order to classify risks, and when possible, measure them and allocate evenly, is an indispensable part of an investment package. The mathematical quantitative methods, such as simulations, can be very well integrated into the risk matrix. Mathematical tools enabling to model different scenarios or multifactor situation model, Monte Carlo simulation can be useful assistants during risk management process, in risk assessment phase, to be more exact. But no mathematical tool would be ever able to come even close to the quality of decisions or judgements that dozens of various specialist, each expert in a particular field, involved in PPP project risk evaluation and each of whom is of high relevance and paramount importance for PPP multiple activities, can produce. The mathematical quantitative methods can be very well integrated into the risk matrix, because just as risk management is not a panacea, but is a great source of information helping to take the right decision, the mathematical approach can be just a valid method of probability calculation or certain event assessment, but never a decision producing machine, at least within a PPP project framework. Just as the lack of risk management approach and contracting expertise can lengthen or even kill a PPP project (Baumgärtner et al. 2009), the unintegrated and uncoordinated usage of qualitative and quantitative risk management tools will only slow down, even deviate, and definitively raise the cost of the risk allocation process.

III. PPP tool as applied to the Russian Healthcare Sector

1. PPP in the Russian Federation

Infrastructure investments are considered to be one of the most effective tools for stimulating economic development, while infrastructure development is a necessary condition to ensure economic growth. According to the calculations of the World Bank, a 10% increase in financial investments in infrastructure provides a 1% economic growth. Moreover, according to the World Bank in order to maintain the current level of world economy development (3,3%) the world infrastructure needs 3,8% of GDP investment. Now around a trillion of dollars is invested, while $6 trillion of infrastructure investment is needed annually. However, currently the global demand for infrastructure substantially exceeds the annual actual level of investment in it. A similar problem threatens the Russian Federation, where infrastructure development has become one of the key topics of the new political agenda, meaning the issue is being discussed not only within the expert environment, but also at the highest governmental levels. It goes without saying, Russia should increase its spending on infrastructure.

The total cost of infrastructure in Russia, according to the estimation of the same World Bank, should amount to 4-5% of GDP. In fact, the Russian intention for 2019, as announced by the president of the nation, is to achieve 5% of GDP in infrastructure investments (in 2016 it was about 3% of GDP). Therefore, the Russian Federation should work at a double speed in that direction, undertaking fundamental measures, bearing in mind that the market potential and maximum volume of private sector investment, within PPP framework, it can accommodate, under the most favorable scenario, is 500 bln rubles a year (6,6 bln $). Considering that now private investment in infrastructure, within PPP model, amount to 270 bln rubles (3,6 bln $), the target of almost doubling this number would already become a breakthrough for the Russian Federation. Among obstacles, that might impede the achievement of this target, as noticed by the experts during the Russian PPP Week 2018, is the lack of competence in project development and, therefore, well prepared projects. The deficit of ready-to-finance projects even on the market of large concessions (over 1bln rubles or 13 mln euro) and even in the presence of interested to invest into public infrastructure large financial institutions is noticed also by the experts.

The level of depreciation of fixed assets in the infrastructure sectors in Russia is estimated as high (higher than the average for the BRICS countries): 60% of infrastructure is worn-out. According to the Global Competitiveness Report, Russia, based on the quality of overall infrastructure index occupies 64 position out of 140 possible (Global Competitiveness Report 2015). According to the Ernst and Young report among all the infrastructure sector facilities (road,

port, airport infrastructure and electricity supply) only the railway infrastructure could be considered of a relatively high level of quality. Note, the report does not cover healthcare infrastructure, confirming the general trend, noticed and verified during my research work, of lack of data on healthcare infrastructure, expressed, at best, in aggregation and unification of healthcare facilities within the broader social sphere group, or complete disregard of this important self-standing group in comprehensive data bases.

The scarcity of available data is perceived even more wherever PPP sensitive information enters the game. The academic literature talks about scarcity of available data necessary to evaluate effectiveness of PPP as method of improving health and welfare delivery (Barr 2007; Vecchi et al. 2010) and very often subjective criteria used for its effectiveness evaluation (Kolesnikova n.d; Hodge and Greve 2007; Badalov et al. 2017(2)) as well as scarce data quantifying PPP health projects in general. It's quite difficult to provide the exact number of PPP healthcare projects throughout the world, for a number of reasons. Among some of them PwC mentions "limited data available on the sector, the wide and varying range of models included under the definition of a PPP in different reports, the different stages of development of current PPPs (e.g., in the pipeline vs. signed vs. operational) and the tendency for healthcare PPPs to be lumped together with other "social sector" PPPs (e.g., education)" (PwC 2018). The issues of PPP in Russian healthcare sector will be covered in more details in another chapter dedicated to this topic.

Russia is the sixth largest economy in terms of GDP and it enjoys the largest GDP per capita among the BRICS countries. It is characterized by stable growth rates (GDP per capita has almost tripled and the average nominal monthly wage has increased almost 11 times since1999), low inflation rate (2,5%) and low unemployment rate (5,2%). With the population of 143 mln, it is the largest country in the world by land area. However, the currency crisis of 2014 followed by economic recession has seriously deteriorated country's macroeconomic situation, worsening public finances, raising inflation and weakening domestic demand. Economic sanctions together with uncertainty of future prices for Russia's mineral resources rendered the country's economic picture even more pessimistic. When talking about increasing or decreasing certain levels of certain variables, one should have some reference points. The most appropriate in this case would be the country's actual needs in infrastructure provision, even though other foreign countries' experience can also be a useful indicator to compare yourself with.

According to the Ministry of Economic Development, the uncovered need for financing infrastructure for 2019 in Russia amounts to 1.6 trillion rubles (21 bln euro)[12]. In the sectoral context, the most significant volumes of budget expenditures are needed for the development of

[12] This estimated infrastructural gap was obtained as a result of a comparison of budget plans and the need to increase investment to 5% of GDP (

transport (950.0 billion rubles.), utility-energy (300.0 billion rubles) and social infrastructure (200.0 billion rubles) (2,6 bln euro). The Russian state budget cannot afford it. There is nothing left to do but create favorable conditions for the investors to come. Private investments in infrastructure are more needed now than ever before. Moreover, one of the tasks put by the President of the Russian Federation is to achieve growth level higher than the world one, that is 3,3%. Therefore, the necessity of Russia's adjusting its PPP standards to the best world ones seems obvious, especially in the conditions of always more globalized world economy with growing pressure from foreign investors as well as increased influence of international organizations.

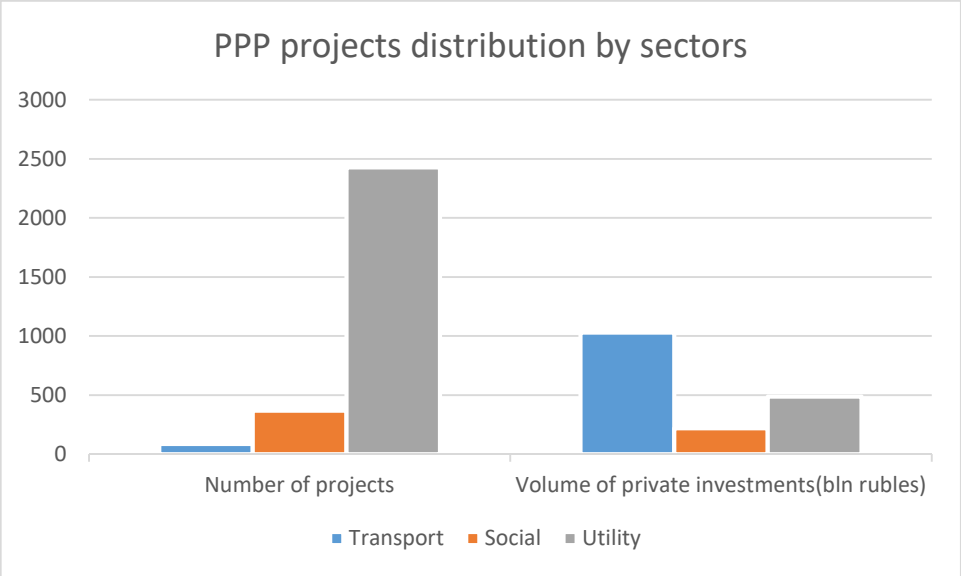
During the last 5 years, the real expenditures of the federal budget and the subjects of the Russian Federation on the infrastructure have been quite unstable. In last five years' period public expenditure on the development of public infrastructure facilities decreased from 1,92% to 1,79% of GDP, while the private infrastructure investments fell at a bit faster speed from 1,8% to 1,2% of GDP. Thus, since 2011 the total investment in infrastructure, including social one, in relation to GDP, has, on average, declined by 0,2 pp per year. It can also be noted that public investment in public infrastructures is unevenly distributed both on sector, and regional territory levels. Thus, in terms of total investment the obvious leader is presented by the transport sector. The largest recipients of investments from the geographical point of view are the Central and North-Western federal districts, with federal capitals being the absolute leaders.

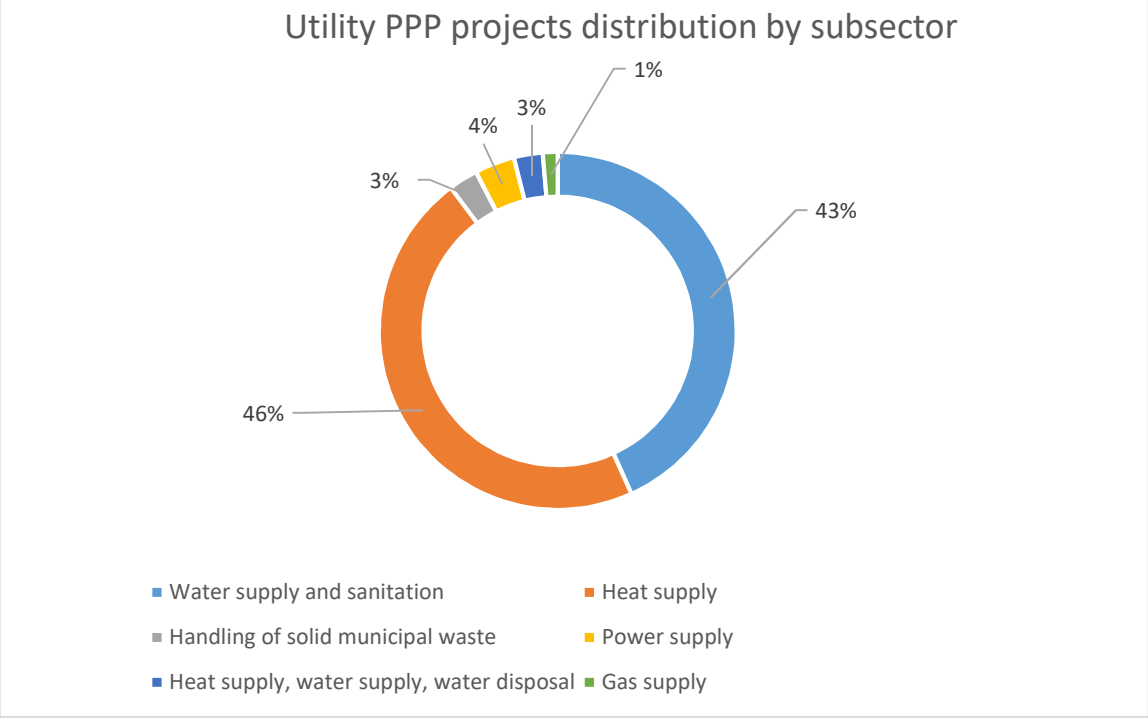
Coming back to investment distribution within different infrastructure sectors of the Russian economy, the greatest amount of money, again, as reported by Ernst and Young, is planned for railway transport infrastructure development, being the part of the program of high-speed railway development through 2030. The second-largest direction of planned infrastructure investments is road and bridge construction. This mainly includes projects under the jurisdiction of the state corporation Avtodor and those in the Russian transport strategy through 2030. In fact, it has also been reported by the National Center of PPP Development that over 65% of all planned budget expenditures for infrastructure development in the framework of state and federal target programs for 2018-2020 are provided by two programs both aimed at developing transport networks - the volume of financing for them is 1 945.6 billion rubles (25 bln euro), while for the healthcare development programs, for instance, 110,8 billion rubles (1,5 bln euro) will be allocated. This figure, apparently small if compared with that for transport, is in fact almost sufficient to cover the overall needs of the healthcare sector infrastructure. Furthermore, the estimated possibility to cover infrastructure needs through PPP operations is higher (30%) in the health sector than in the transport sector (23%) (National PPP Development Center[13]). In fact, the

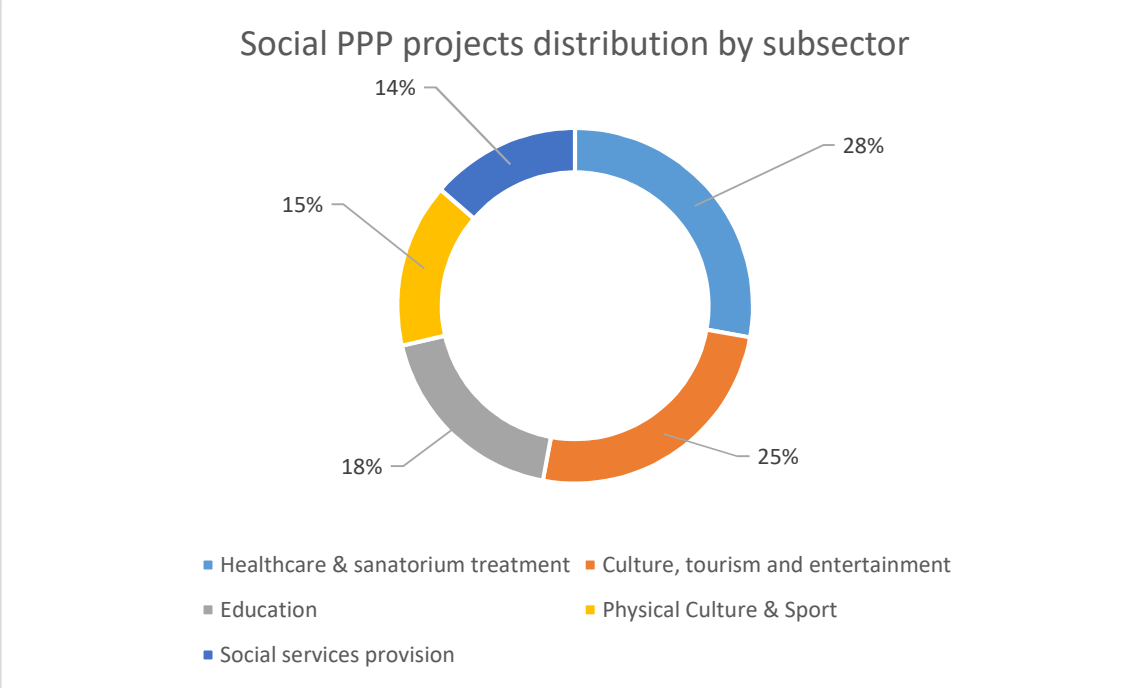
[13] http://pppcenter.ru/

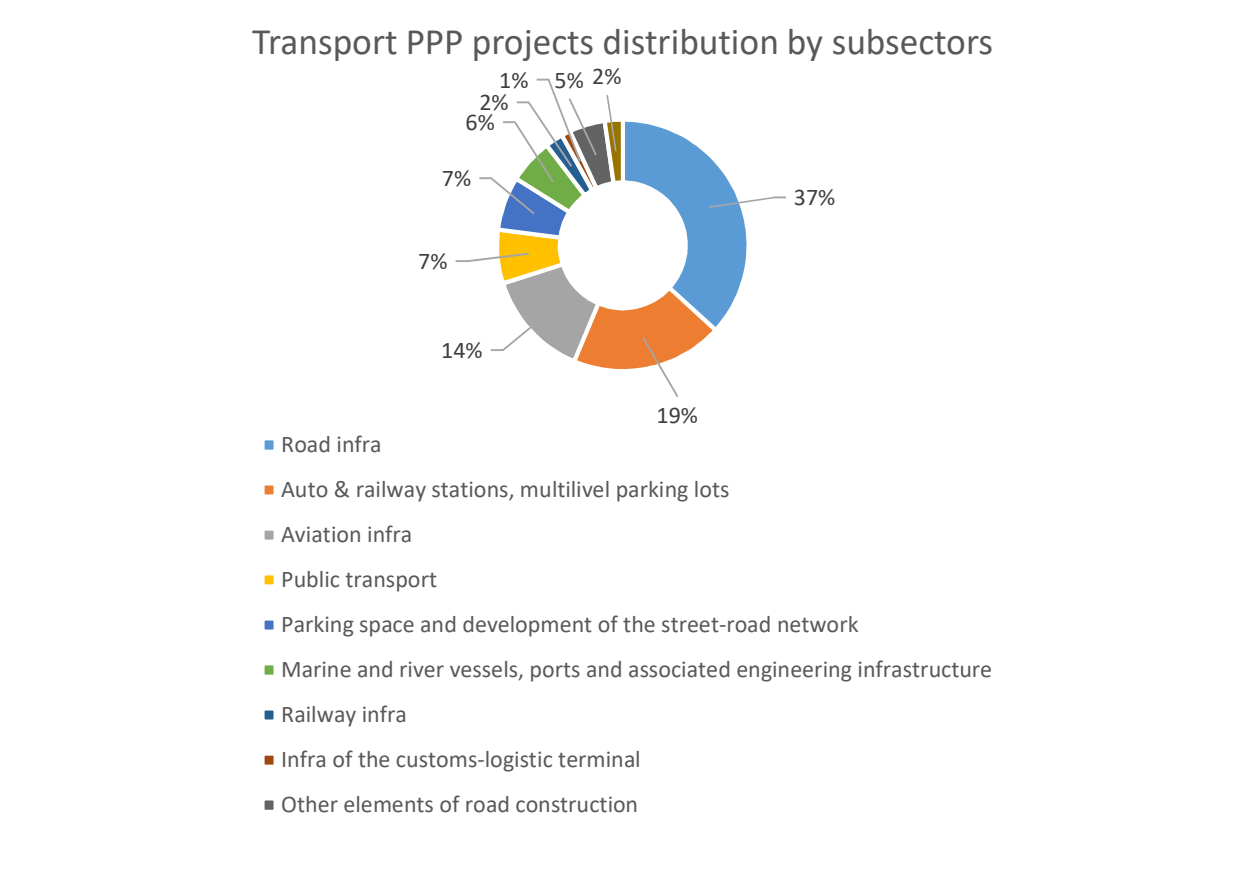
road infrastructure, being one of the most commercially attractive sectors, together with electric power supply, is the one that is always developed the first within PPP framework all over the world, and Russia in this sense is not an exception. If one has a look at the industry sectors breakdown of PPP projects implemented in Russia, the percentage advantage (in the volume of investments) of projects in transport becomes evident (See graph №2).

Graph №2: PPP projects distribution by sector









Sources: National PPP center, proper elaboration.

Chizhevskaya and Magomaeva after having analyzed the best foreign PPP practices, suggest the most promising sectors where to develop PPP in Russia is transport, public utilities

and social infrastructure, the latter though to a lesser extent (Chizhevskya and Magomaeva 2014). The PPP projects market reflects well the steady and maintaining in time high demand for the development of transport infrastructure in Russia. What is more, the existing infrastructure gap in transport sector, remains to be the most serious one, despite the fact that transport sector is the leader, both in absolute and relative terms, in the volume of investments in the consolidated budget.

In the current economic and political environment, PPP in Russia can be viewed, on the one hand, as a mechanism for attracting additional resources to the public infrastructure, on the other hand, as an instrument for stimulating economic activity. PPP implementation mechanism is attractive for Russia for several reasons. Firstly, it can ensure the long-expected and badly needed modernization of its Soviet-era period infrastructure. Secondly, it can become the source of financial returns coming from the public assets, and unlike much feared in Russia privatization, with the state remaining the owner of infrastructure facilities. Thirdly, in the conditions of forecasted reducing budget expenditures, including in infrastructure projects, the private party capital can become the only viable solution for this infrastructure dilemma. Finally, management of state owned assets can be improved thanks to private party better management capacities and its innovation-inclined mentality. One more aim PPP mechanism can achieve in Russia is to stimulate the development of regions, the thing considered to be Russian specific PPP driver (Varnavsky et al. 2010). Badalov et al. also speak about PPP as an accelerator of innovative development of the economy (Badalov et al. 2017 (1)). A comment in this regard was also made by the Chairman of the Board of RISE Capital Group during Russian PPP Week 2018, Gerard Lopez, who drew all the participants' attention to the Russia's privileged position of having to create the major part of infrastructure from scratch. The privilege, in his opinion, consists in the possibility of investing and building not just infrastructure, but smart, intelligent infrastructure facilities, being able in such a way not just reach the world's leaders but to go beyond. It will of course, be not easy, and it will depend on many different factors, as also confirmed by the majority of the discussion participants, whether Russia will be able to take advantage of the situation and make a leapfrog in country's infrastructure provision, but the possibility is present (Plenary discussion: Spatial development 2024: Infrastructure determines economic growth).

PPP in Russia is considered to be a public political tool aimed at investment attraction and infrastructure development. Moreover, public policy is regarded to be one of the strongest and probably, the major, internal driving force for PPP development in Russia, which in its turn, according to Mouraviev, is grounded in three other typical only for Russia drivers: the need to increase investment attractiveness of certain industries, the need to stimulate economic development of regions and the need to attract private resources, in particular, for utility and housing infrastructure (Mouraviev 2012). Therefore, many public resources and efforts of all the

stakeholders are being invested nowadays in the Russian Federation in order to develop the PPP market and to steer it in the right direction.

One should not forget that even though the development of PPP recently became one of the strategic tasks of modern economic and legal policy in Russia, this institute is only beginning its free swimming in the unknown waters of the Russian market guided by newly written, untested in practice rules, and, as a consequence, brings out features typical only for Russian PPP. Thus, according to the KPMG report, projects implemented with the PPP scheme in Russia as compared to other developed countries result to be more "disadvantageous" from the capital cost point of view than the classical government procurement: the project realized through PPP scheme abroad costs the government only 1% annually more than if it was procured by the traditional government means, while in Russia this gap amounts to 6%. This difference can be probably explained by lack of competition between banks, immaturity of the capital market, lack of trust of the banking system and, consequently, high cost of long-term borrowing as well as lack of negotiation and management of huge PPP projects skills both by private agents and public authority.

Lack of competition between banks, for instance, is well reflected by the fact that financing of PPP projects in the Russian Federation in 9 cases out of 10 is performed by TOP-5 banks (Gazprombank, VTB, Sberbank, VTB-24, Bank of Moscow and VEB) and according to some sources, in practice their number is further limited to only 3 banks. The senior vice president for infrastructure of the Direct Russian Fund, Sedov I.L. also mentioned extreme scarcity of banks in Russia able to finance big and long-term (over 10 years) projects[14]. Therefore, the greater cost of project financing and its creation should be compensated by a more effective implementation, made possible through effective risk allocation, for example.

Risk allocation is another pressure point for the Russian PPP market. Nowadays, the most frequently used method of risk allocation by the PPP practitioners in Russia, besides contractually embedded commitments, is the risk matrix approach or traffic lights method, quite often contested by the opponents of qualitative methods in risk management issues who advocate for using more mathematically sophisticated quantitative ones. Risk matrix remains the most commonly used method, while for the risk mitigation partners usually rely on contractual commitments embedded in the agreements. The main argument advanced by the proponents of visually friendly and comprehensible for all stakeholders, risk matrix, is the lack of already implemented projects and, therefore, robust databases containing all the statistical information necessary for executing these sophisticated calculations. Another strong point put forward by the advocates of qualitative method of risk allocation is that quantitative methods can be very well integrated into the risk

[14] Session: "Foreign players in Russia's PPP market", Russian PPP week 2018).

matrix, thus finding the common denominator[15]. Mouraviev in 2012 was talking about the Russian government unpreparedness in many aspects crucial for PPP development and its lack of solutions regarding allocation of various risks between two partners, what was slowing down the progress of PPP paradigm in Russia in his opinion (Mouraviev 2012). Still, in four years' period Russia managed to make quite big advances, learning from foreign countries lessons in PPP application, though trying to build up its own PPP paradigm: progress both in PPP legislative field and hundreds of projects launched talk clearly about it.

If it is true that initially the main motive of PPP emergence was to reduce public sector deficit by introducing private sector investments into public infrastructure assets and improved service delivery (Grimsey and Lewis 2005), it is also true that with the passage of time other reasons for PPP implementation entered the stage. Among the most common strong points usually advanced by PPP advocates nowadays is the private sector management skills and technical expertise, efficient allocation of risks and responsibilities, and of course cost reduction. For instance, it has been demonstrated that in Russia PPP mechanism is used not only to reduce state expenses but also to minimize risks, the risk of public finance control, in particular (Revina et al. 2017). Though these reasons for PPP application should be well balanced in the project for it to produce the maximum possible effect in terms of costs and efficiency, there might be variations at least in prioritizing one reason rather than the other depending on the final goal pursued as well as by the level of evolution of the PPP mechanism in a particular country. Thus, according to some Russian authors, the main advantage of the PPPs nowadays in the West is the higher quality and not the low cost of the projects (Berezin 2015). The conclusion that, if backed up by some concrete examples, could have been reasonable, otherwise it seems a bit precipitate and ungrounded.

As far as success factors of the PPP implementation projects in Russia, it can be said that there are certain similarities with the world literature on the relative subject, but some peculiarities, more typical for the PPP beginners can also be outlined. Thus, presence of developed legal and regulatory framework together with creation of specialized institutions fostering PPP development is of particular importance at this stage of PPP evolution. In addition, the practical experience of applying a variety of legal forms of PPP and the creation of a market for infrastructure projects of a particular region with clear legal framework and sources of funding will be more than beneficial for successful PPP projects realization (Avtsinov 2014). Investment in human capital, in particular as far as project development competences is concerned, was underlined during the Russian PPP Week 2018 by the executive director of the National PPP Development Center, Tkachenko M.V. as the main factor impeding smooth evolution of PPP mechanism in Russia.

[15] Session: Risk management and project management in PPP: Russian and foreign experience. Russian PPP Week 2018.

In the world practice there is a clear understanding of PPP mechanisms, even though there is less clearness concerning the PPP definition. In most regions of Russia concept of "public-private partnership" is treated very widely, as any type of interaction between business and government, which can positively affect the economic development of the region. The lack of a common understanding of the mechanisms of PPP leads to the fact that each region develops certain areas of the economy in co-response to their subjective vision of the problem, which does not contribute to the implementation of the Concept of long-term socio-economic development of the Russian Federation (Avtsinov 2014). Thus, if we take healthcare sector, different subjects of Russian Federation have regional programs on healthcare development that include information on the necessity to develop PPP mechanisms in the region. However, there is no clear understanding of what a PPP project is and which benefits it provides. Most regions consider it as a method to attract additional investments and provide services to clients or to transfer supporting activities to the private partner (Storozheva 2016).

By way of summing up, the aims of PPP development in Russia can be generally summarized in the following way:

1) to accelerate the economic development of country's regions thanks to private investments into infrastructure projects and improved service provision in the public sector;

2) to save budgetary resources, at least in the short-time period by means of equal distribution of payments to the private sector in the long term perspective

3)to increase efficiency of budgetary resources, as well as quality and efficiency of public services delivery thanks to private party involvement

Among main obstacles that impedes smooth and homogeneous implementation of PPP projects in Russia, as well as significantly impairs the foreign private partner entrance into the PPP Russian arena, as noticed by numerous PPP practitioners, is the lack of a strategic, goal-oriented approach to infrastructure planning and development. The lack of National Program that includes well-defined projects, required for the country growth, a kind of a long-term plan of strategic infrastructure investment needs is a significant limitation for the PPP development in Russia, as noticed by experts [16]. It's necessary to note that it's not just the list of projects, but the detailed analysis of present and future of these projects, usually in a 10-years perspective, together with other successful case studies and experiences from different countries. Moreover, consistent and gradual process of projects proposals, i.e. a well-studied and calculated National plan of projects to be implemented is also an important measure that can contribute to the successful arrival at the

[16] This fact has been underlined by both Ilya Sedov, Senior Vice President of the Russian Direct Invetsmnet Fund (RDIF) and Hafiz Salikhov, Vice Chair of the Bureau of Specialist on PPP in the UNECE, Representative of the Russian Federation during the Russian PPP Week 2018.

financial closing (Shabashevich 2011). The United Kingdom, for example, has a 30-years plan for the transport projects. Europe, in general, to reverse the downward spiral European levels of investment find themselves in after financial crisis and to regenerate the European economy, in 2014 EU launched the Investment Plan for Europe, also known as Juncker Plan. The program, born with the aim of making better use of financial resources and removing barriers to investment, has proved to be effective, resulting in a number of initiatives that were able to unlock financing coming from private investors.

Talking about Russian reality and considering its macroeconomic situation and its need in foreign capital at this particular historic period, this list of projects is of particular importance for it to be able to attract a foreign investor. This national infrastructure projects plan will enable the foreign investor to evaluate all available projects, to make right calculations, to program its investment activities and, eventually, to make decision on becoming the partner of PPP initiative on the Russian market. There should be a clear signal for a foreign investor in what sector their participation is welcomed or at least allowed, and what limitations for them are present and whether it is worthwhile to pursue the project or not. Therefore, the development of the National infrastructure program should become the first step for the Government in order to achieve its long-term strategic economic goals in infrastructure development. This issue is of particular importance within underdeveloped PPP markets, or better to say where PPP is a relatively new instrument. That is why "know what you want" referring to the government's ability to clearly formulate its wishes and define well PPP projects may make a difference in attracting potential bidders into PPP market. Moreover, a clear and well-articulated country development strategy is a necessary condition for any effective partnership. Nowadays infrastructure planning in Russia has extremely fragmented nature (National Report, 2017).

It has been widely recognized that an important prerequisite for the correct evolution or even the birth of PPP institution is a clearly expressed political commitment, the absence of which very often resulted in project failure, since the private party is very improbable to go ahead with costly and time consuming project preparation without clearly demonstrated political will. In particular, the development of institutions and tools of public-private partnerships has been determined as a strategic direction in the Conception for the Long-Term Social and Economic Development of the Russian Federation to 2020, approved by the Russian government in 2008. The Russian Federation has shown political commitment to seriously undertake PPP mechanism development and demonstrated political will to go ahead in the evolution of this tool by adopting a long-awaited Law on PPP in the beginning of 2016, by encouraging the adoption and application of regional laws on Concessions, all over the Russian territory, which, by the way, demonstrated their viability and produced a number of successful national projects with the foreign private

partner's capital participation - Pulkovo Airport, the Western High Speed Diameter highway, being the most prominent ones (see appendix 13 for their brief description).

Russia was noticed long ago to have become receptive to the impulses that would allow her to become a mature and established member of international community, and in this sense PPP is presented as a good opportunity for her to seize (Mouraviev 2012). The efforts undertaken by Russia on the way to a full-fledged interiorization of PPP and the achieved results, in fact, have been positively assessed by the OECD which made an overview of public governance of PPP in the Russian Federation and gave its recommendations (OECD 2014). Thus, political will, that can be expressed as clear articulation of willingness on behalf of key stakeholders of the government and political leaders, that is believed to ensure public awareness of benefits, risks and costs of PPP, is claimed to be present in the Russian Federation. The report also talks about the Russian authorities' awareness of the measures necessary to take for the establishment of a good public governance framework for PPP, as well as authorities' active steps taken to improve legal framework and to strengthen institutional capacity. As far as the soundness of regulatory framework is concerned, a new federal law on PPP, which took effect on January, 2016 seems to address the OECD principles correctly. Also the infrastructure prioritization process respects the OECD recommendations on the relative issue and corresponds to those found in many OECD countries (idem).

Each decision on striking a PPP deal should be grounded on careful comparative study of various investment and infrastructure procurement methods in order to select the one that would deliver a better VfM for the public purse. The VfM evaluation, that should be maintained and constantly supervised during renegotiations, among other things, requires sound competition for all potential bidders. The VfM approach became part of the Russian PPP evaluation procedure quite recently: it received its official status only under the PPP Federal Law №224 in January, 2016. According to the OECD the main tool Russia relies on for ensuring the VfM from PPP projects is competitive tendering. The insurance of transparent competitive procedures to all the market participants, in general, is a necessary condition to have an access to PPP projects market and is a prerequisite for the public-private partnership mechanism to function correctly, delivering the best VfM.

Therefore, as it has been correctly noticed by OECD experts, Russian authorities do make efforts to ensure level playing field for all the participants, but still there is enough room for improvement as far as fair competition on the PPP Russian market is concerned. The level of competition differs from one sector to another based on sector's maturity in terms of PPP and its relevance for country's overall economic development. A similar concussion was made by OECD commission regarding Russia's efforts on developing a public sector comparator, risk management

tools, renegotiation procedures and rules for operational phase of PPP, the insights for which will be taken from successful PPP projects already implemented in Russia (idem). Thus, Storozheva, in the result of cross-case analysis on CSF of PPP healthcare projects, revealed a lower overall transparency level in Russia, reflected in difficulty in finding project documentation information, as well as lack of competition, leading often to the project failure because of lack of potential bidders (Storozheva 2016).

It goes without saying that PPP preference over other public infrastructure procurement methods should be based on rational, economically justified calculations, but VfM methodology has been criticized for already a couple of years, both by practitioners and academicians (Grimsey and Lewis 2005; Heald 2003; Pollock et al. 2002). The experts in PPP and scientific community worldwide call for moving beyond VfM concept and adopting new, more comprehensive metrics able to demonstrate all broad spectrum of advantages of the partnership. VfM and risk transfer are claimed to be regularly mixed producing erroneous and false results regarding cost and benefits (Roehrich et al. 2014; English 2005). The fact is that VfM will remain to be controversial and a highly contradictory topic between both academics and practitioners for a number of reasons (Hodge and Greve, 2018). VfM estimates and calculations is by no means an easy mathematical exercise even for such an adept in PPP matters as the UK, where VfM has also been blamed to be quite subjective being a quantitative method, as well as subject to political manipulations.

In many countries it is used as an integral part of the tender documentation, through which all winner-to-be should go through, criteria the PPP tender applicants should meet. Even though the Value for Money Methodology has been quite recently approved, under the auspices of the Russian PPP Development Center, to be carried out under the PPP Federal Law № 224, there are some concerns regarding its usefulness and applicability among Russian PPP practitioners as well. Thus according to the Executive Director of Infrastructure Financing Department of Gazprombank, the newly provisioned by the PPP Law VfM assessment tool "does little good for the project evaluation, because except very narrow group of people (auditors, banks, probably investors), the public partner does not understand how to calculate and what for it serves. The calculations on VfM has no any constitutional force, because the Ministry of Economics has its own methods of calculation of eventual increase of price. It's just the formal requirement which neither prevent projects from being implemented, nor it helps or accelerates the PPP projects, justifying its feasibility[17]. The difficulty for Russian PPP market in VfM evaluation also consists in presence of multiple types of the so called financial-investment audit (the Russian VfM

[17] Session "PPP filter: How to justify the project need and to choose the effective method of its implementation?" session, Russian PPP Week 2018.

analogue) with different methods and approaches applied in different sectors. There are those who for whom VfM calculation is simply a fiction, as many things in public finance.

Finally, coming back to OECD evaluation of Russian efforts undertaken to improve PPP application, fiscal risks and affordability issues, constituting the corner stone for making the final decision concerning PPP preference, have been evaluated. The strong foundation of the Russian budget process, that ensures affordability for PPPs, and some other recently introduced laws aimed at rendering the public procurement process more transparent, has been praised by OECD experts. Nevertheless, much remains to be done to improve the integrity of the procurement process and to prevent corruption. Thus, among the recommendations of OECD is to adopt better tools for fiscal risks and PPP affordability assessment, improving transparency in disclosing Federal government guarantees and liabilities (OECD 2014). The latter is important because any lack of transparency from the public sector might compromise the true quality level and value for money concept (Hood et al. 2006). In fact, PPP different treatment in terms of budgetary law, as one of the possible obstacles for the foreign private investors, was also underlined by the legal expert[18]. For example, there seems to be little clarity for now as far as whether the region will be able to include the cost of the project into its budget (referred to as on/off balance accounting in the international PPP practice).

The issue of political will, so important for correct PPP model development, is tightly linked with the notion of transparency, on different levels and in different understandings, which in its turn leads to trust and confidence building between the two partners. The word partnership itself requires relationships to be honest where each of the sides clearly expresses its motivations, goals it plans to achieve and advantages it could deliver trough collaboration. In fact, one of the policy recommendations for a more efficient PPP implementation given by Yang et al. to the governments of transitional economies is to ensure more transparent and fairer environment for PPP operation, as well as credible and capable institutions and legal system that would inspire private investor to trust the government and eventually to be eager to enter into PPP relationship (Yang et al. 2013). Russia, unfortunately, is still yet distinguished by the lack of trust between business community and the state. Such a situation where the private party is not particularly eager to engage into a long-term relationship with the government definitely does not foster the PPP market growth (Varnavskiy et al. 2010).

Encouraging private party to provide public services, as it was stressed by Hodge, among other advantages, might promote stronger business and stimulate investor confidence, so crucial for Russia in this historic time lapse (Hodge 2004). Also Alpatov et al. noticed the weak level and

[18] Session: “Foreign players in Russia’s PPP market”, Russian PPP week 2018.

inefficient cooperation between government, business and civic society in Russia, lagging behind that of industrialized countries (Alpatov et al. 2010). Trofimova speaks about the Russian state as not very trustworthy partner from the private sector point of view and, thus, the importance of preparation of competitive proposals within the PPP framework (Trofimova 2014). Even more so, the PPP can be considered as an important tool for strengthening the long term collaboration between private and public sectors, which is one of the Russian government priorities nowadays.

Whether the country is well familiar or has just recently introduced the PPP delivery mechanism into its national legal framework, it is highly recommendable to have a separate PPP unit, staffed with experts from various fields. This agency may have a number of tasks and aims, the most important being creating legal frameworks and shaping adequate institutional environment in the PPP sphere, informational and methodological support of PPP undertakings, raising the level of expertise of PPP participants in PPP related subjects, improving quality of project preparation, overseeing and regulating PPP implementation mechanism, and, finally, promoting a positive image of PPP institute at all country levels. Thus, the principal goal of the PPP center is creating an enabling environment for PPP institution development.

In Russia this function is performed by the Association "Public Private Partnership Development Center" (hereinafter PPP Development Center) established in 2009 in order to consolidate all the stakeholders to develop public infrastructure by means of PPP. It is one of the key PPP expertise center in Russia whose goal is to create adequate conditions for accelerated development and modernization of Russian public infrastructure with the help of PPP model. It is also a national think tank which in collaboration with leading universities conducts applied research, publishes analytics and informational material, organizes professional educational and advanced training programs and contributes to the process of law creation and evaluation on both federal and regional levels.

PPP, besides being multidisciplinary subject, involves projects, intensive not only from financial capital point of view but also from the human capital one, the projects that require highly qualified experts from various fields of knowledge. Generally, for the public-private partnership system to function effectively, it is necessary to ensure the lifelong upgrading of skills of state employees, and in case of such PPP newcomer, as Russia, building of expertise from scratch and acquiring as much experience from the old PPP market players as possible. Much attention should be paid to raising the overall professional level, ensuring presence of advising and consulting services on the implementation of projects at all territory levels of the Russian Federation.

The importance of highly prepared and qualified in PPP related subject matters personnel, both on public and private partner sides, for the development of successful projects, is difficult to underestimate. Competence, accountability and expertise of private and public sectors are crucial

for success of PPP undertaking. For example, Rossi et al. in analyzing the application of PPP in Italy, conclude that it suffers from low level of collaboration between public and private parties, one of the reasons of which is a very low level of preparation of local offices and consequently difficulties in managing the partnership for the public local actor (Rossi and Civitillo 2014).

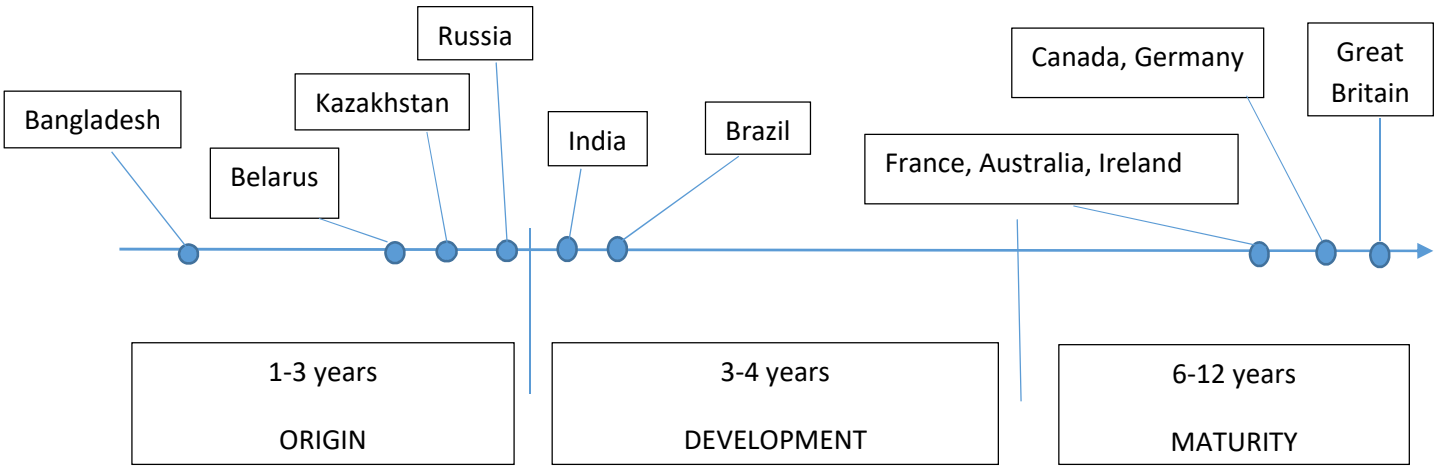
Therefore, investing in skills and resources is crucial for any country, but it is of particular urgency for those who have got acquainted with PPP mechanism not so long ago. Some authors among factors determining successful PPP development in Russia underline the importance of attracting foreign qualified experts able to provide assistance in various areas of PPP project preparation and implementation (Chizhevskaya and Magomaeva 2014). Another peculiarity typical of Russian PPP implementation market, especially regional level projects (big cities have overcome this problem), pointed out by Badalov et al. is the tendency of regional executive bodies to confuse PPP with conventional government procurement because of lack of competence of course, what again speaks about necessity of retraining of the personnel, especially at the regional level (Badalov et al. 2017 (1)).

PPP project, by its nature, is a complex undertaking from technical, financial and legal points of view, to say nothing about its high risk charge. If we add a certain level of distrust that has been a distinguishing feature of public-private relationships in Russia dating back from the nineties, the level of complexity of PPP collaboration grows even further. Complexity of the PPP instrument itself paired with, unfortunately, still clearly perceived lack of trust between two key partners of the project speak clearly for the particular need to invest sufficient resources into adequately skilled and prepared teams, who would be able to deliver worthy projects both for the public purse and for the community. Moreover, the newly created expert team is not a temporary phenomenon, but its freshly acquired skills and know-how can, and should be recycled in the future projects, thus becoming out-and-out think tank for the best execution of PPP projects. In addition, highly qualified regional administration is usually better equipped to attract investors and eventually raise the level of wellbeing of its habitants. The hypothesis of a major concentration of PPP in Russia in economically sound regions was confirmed by Trofimova who also associated this fact with higher attractiveness for investments or better qualified local administration personnel (Trofimova 2014).

While the UK, Australia, New Zealand, the U.S., Spain, France and many others have a long tradition with concession PPPs, some countries, including Eastern European ones have been reluctant to implement concession contracts (Dewulf et al. 2012). Countries such as Bulgaria, Croatia, Kazakhstan and Russia are in the very beginning of using partnerships as a method of delivering public services (Vnesheconombank, 2010). It could be said that transitional economies,

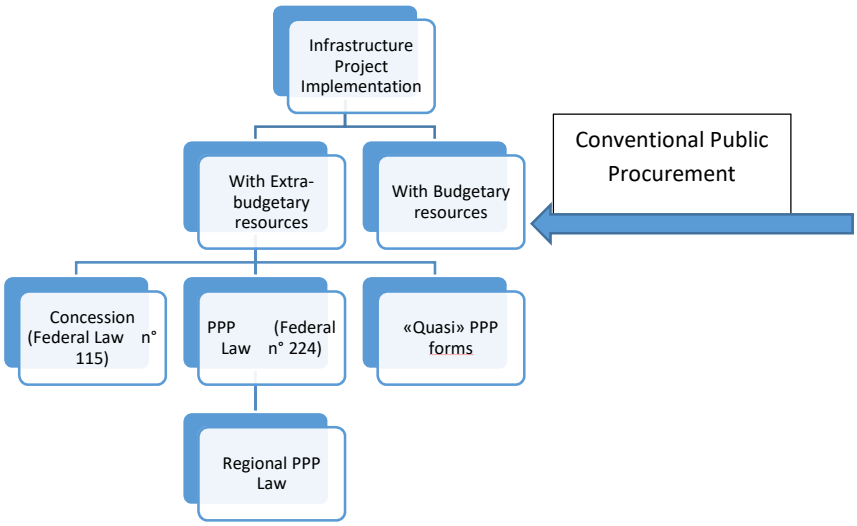
in general, are at the beginning of the evolutionary journey of using PPP for public service delivery (See graph №3).

Graph № 3 “PPP development phases” (according to the OECD)



The majority of CIS countries, unlike the developed ones, have little experience in applying PPP tool for solving its infrastructure connected issues - PPP institution represents quite a new concept for them. Most of them are at the initial stage of development of this investment tool, that is why broader understanding and deeper knowledge of this mechanism, as well as improved capacity for managing them is required in these countries. The legal frameworks in many of them are, accordingly, at the embryonal stage. Having relatively small experience in application of public-private partnership, these countries should create a whole range of supporting mechanisms from scratch for effective implementation of this institute. The country that went further than others in the establishment of all necessary conditions in order to foster evolution of this tool, and, therefore, respective legislation, is the Russian Federation. What is more, the period the Russian Federation is going through now can be definitely called the PPP epoch. There is an overall positive tendency in increasing role of PPP in providing social and innovation infrastructure. Many PPP principles have been laid down in the basis of the program of economic development of the country (Conception for the Long-Term Social and Economic Development; Roadmap for the development of public-private partnerships instruments). Regulatory and legal framework governing PPP is constantly being improved both at federal and local levels (PPP came through the evolution from the law on Concession in 2005, Regional PPP laws, till the law on PPP in 2016) (See Graph № 4).

Graph № 4 “Methods of infrastructure projects implementation in Russia”



Source: PPP Russian Week 2018. Proper elaboration.

PPP knows different models of its realization, depending on the level of both parties’ involvement in the project, risk and responsibility sharing. The structure of a deal may also vary depending on the national legislation as it refers the firms, public sector procurement models as well as political will and ideological conviction (EPOS Health Management 2013). PPP is by no means a monolithic unit in Russia: there are different contractual modes to execute the project. Among principal forms of PPP application, besides the three classical PPP models mentioned above, the four following types are distinguished: life cycle contract, investment contracts, lease agreements with investment commitments, long-term investment agreements. The most common organizational-legal forms of PPP realization in Russia are concession agreements and PPP agreements in the framework of regional legislation.

Concession form of PPP, in general, is deemed to be a global trend, as compared to other forms of PPP. In fact, concession (the most common form of PPP) can be probably regarded the most ancient form of collaboration of the government with the private partner, dating back to the Roman Empire, where this type of agreement presented the legal basis for public baths and road construction. About twenty centuries later, Europe relied on this type of collaboration for the construction of railways, water channels and roads. A bit later the concession contract arrived in the US, China and Japan (KS et al. 2016). Therefore, PPP is not new at all. Although in its modern version it started to be applied a couple of decades ago, the practice of private partner collaborating with the state exist for a couple of decades of centuries. PPP term was born and became popular in the 1970 together with neo-liberalism that started questioning the efficiency of the state and

previously dominant Keynesian paradigm. That is when the NPM became a new fashionable approach.

In Russia, it was Peter the Great who during his visit in the Netherlands with the aim of learning some shipbuilding lessons, came across public-private partnership agreement between Dutch government and private owners of ships. The author speaks about immaturity of such partnership: private party, the owner of the ship, had to protect waters from the enemy and was paid for that service by French and British governments (Matayev 2016). One century later the emperor Nicholas I of Russia granted a concession to Franz Anton Ritter von Gerstner for the construction of the railway line from Moscow to Tsarskoe Selo for which the government provided the land plots as well as state guarantees (Reznichenko 2010). Therefore, PPP despite being sometimes presented as an innovative investment tool for infrastructure development both nationally and internationally, as a matter of fact, collaboration between public and private partners for the designing, creation, financing and management of infrastructure projects, in transport sector, in particular, has centuries-old roots.

The legal and economic principles on which such cooperation was based, as well as models of such cooperation between private and public sectors have changed significantly since then. Nowadays here is supposed to be much more responsibility of partners towards each other, as well as awareness and recognition of indispensable and priceless resources, in this term broadest understanding, each side can share with the other. By way of summing up, though it can be argued as to what degree the before mentioned partnerships could be lawful predecessors of the modern PPP mechanism, the presence of the finance element as well as tighter organizational linkages between the private and public sectors indicate to a clear distinction from the previously practiced relations (Coghill and Woodward 2005).

PPP infrastructure implementation method, intended to use for the construction of socially important objects, where project finance instrument guarantees the project its financial viability and support, would be incomplete and is indeed useless in the conditions of missing effective legislation and normative framework regulating PPP application. Thus, the picture of the state of art PPP market in Russia will be defective without presenting a brief but exhaustive chronology of PPP legislation development in the Russian Federation. The PPP can be defined as a newborn, or better, a toddler, for the Russian market. PPP as an important tool of the industrial policy started to be seriously looked at and discussed in 2002.

The ice was broken in 2005 when RF Federal Law №115 “On Concession Agreements” (hereinafter Law on Concessions) was adopted. Though, it provided for only one type of numerous PPP “alphabet soup” models – only the BTO concession, it was the breakthrough for the Russian legislation, also considering that the rest of the world had been developing this mechanism since

1990s. The global crisis of 2007-2008 spurred further the overall interest towards public-private partnership on the behalf of the governments of both developed and developing countries. In 2008 the Russian Government approved the Conception for the Long-Term Social and Economic Development of the Russian Federation till 2020, where development of institutions and tools of public-private partnerships has been determined as one of strategic directions[19].

In 2011 under the leadership of the President and Prime Minister of Russia the Investment Fund of the Russian Federation was established with the aim of fostering direct investment in Russia, working closely with leading investors and supporting promising Russian companies. After years of elaboration, 10 years after the adoption of the Law on Concessions, in 2015, finally, the RF Federal Law №224 on Public-Private Partnership (hereinafter PPP Law) was passed and a year later, on first of January 2016 the new PPP Law came into force. Before that date the only possible and legally regulated PPP model was the concession agreement, based on the federal law on Concessions. A few packages of amendments were required to make the Concession Law work in practice.

In the meantime the subjects[i] of the Russian Federation were developing their own regional PPP legislation, that envisaged greater flexibility of the project structuring as well as the possibility to remain the legal owner of the project after its termination. Thus, in Russia, almost every subject (constituent entity) of the Russian Federation had its regional law on PPP. Only two subjects of the Russian Federation have neither public-private partnership projects, nor regional legislation elaborated in this area: they are the Chechen Republic and the federal city of Sevastopol. According to experts, state-private partnership in Russia, despite its potential perspectives, is unevenly developed across regions

Regional legislation proved to be viable, having a number of advantages, such as inclusion of a much wider range of PPP models as compared to Concession Law and therefore giving birth to numerous successful projects in various sectors all over the national territory before the federal law on PPP was finalized and came into force. Some of them, the first regional law "On participation of St. Petersburg in public-private partnerships" in particular, received particular prominence and fame thanks to numerous successful projects implemented within its legal framework. St. Petersburg became one of the first constituent territories of the Russian Federation to put into practice the institute of PPP while realizing the investment projects (Berezin et al. 2015).

Even nowadays private partner gives preference to the regional PPP law rather than the freshly adopted federal law on PPP because of the former law's major flexibility and less risk exposure for the bank, among principal reasons. This seems to confirm the world trend in PPP

[19] http://www.consultant.ru/document/cons_doc_LAW_82134/28c7f9e359e8af09d7244d8033c66928fa27e527/

health legislation. For instance, the increased number of PPP projects in healthcare developed by local rather than national governments worldwide is explained by PwC experts by the better ability of the former to listen and respond to the local health needs (PwC 2010). In fact, the majority of health projects (91, i.e. 83%) in PPP in Russia has been implemented within regional regulatory framework, that is in line with the world trend, underlined by PwC. Talking about regional law on PPP, the heterogeneity of projects distribution implemented under this law framework, both from geographic and the investment volume point of view should be underlined. Thus, 87% of liabilities contracted under this regional law on PPP falls on two Russian regions – St. Petersburg and YNAO[20], while 96%, almost all investment volume of private party is concentrated in 15 PPP project agreements (National PPP Center Report 2018).

Though it's true that regional, or local, governments are usually closer to local needs, thus knowing better the region's deeper problems and often the best ways to solve them, but it is the national government duty to define a legal framework that will enable local regulations. The adoption of PPP Law not only created favorable environment for the attraction of private sector investments into infrastructure development traditionally dominated by the state, but also embodied an important and necessary step for the development of PPP at national level. Not in vain, among other pieces of advice usually given to the governments, especially whose PPP markets are found in the infantile stage of development is the establishment of "a national PPP framework that enables local governments to tailor solutions" (PwC 2010). With coming into force of the PPP Law on January,1, 2016, though, the regional laws of the subjects of the Russian Federation can be implemented only to the degree they don't contradict the recently approved PPP Law.

The introduction of PPP law was conditioned by several reasons, among which there were limits of the previous Concession Law, differences in PPP legislation at regional level and their possible contradiction with the Federal Law, different development practices of PPP regional legislation, incompatibility with the international PPP models and finally, the necessity to regulate the relationships between all the subjects involved in PPP at the federal level. Because of the recent status of the newly adopted Law on PPP, today there are no completed projects based on this law.

The Federal Law on PPP has several obligatory and additional conditions the project should respect in order to be called the public private partnership as envisaged by the Russian PPP legislation. Thus, obligatory elements include the construction of the object of the agreement, its full or partial financing by the private party, its operation or technical maintenance, and, the most important, the private partner becomes the owner of the created object of the PPP agreement.

[20] Yamalo-Nenets Autonomous Okrug, Ural Federal District, West Siberia.

Additional conditions cover designing, financing of the operational and/or technical maintenance of the object by the private party, partial public financing of the object creation and, finally, the possibility to oblige the private party to transfer PPP project to the public partner after expiration of a certain period.

If before the adoption of the Law on PPP, the widespread debates on PPP covered "for" and "against" law adoption issues, once the Law has been enforced, the debates remained, though the topic has changed. Will a new regulation on PPP be able to foster the development of PPP in Russia? Will it be able to attract private party to participate in public infrastructure projects? Will the new law lead to a more efficient use of public resources? These questions, though being of great importance for the overall success of a new PPP paradigm in Russia, belong to a strictly legal field of knowledge, and are not covered in this work. Quite an exhaustive answer to these questions was provided by Maslova who in her comprehensive study tried to give reasoned and justified answers by analyzing the content of a new PPP law and comparing it with the best international practices, as well as evaluating it from perspective of the existing Russian legislation on PPP (Maslova 2015).

According to the General Director of Russian Direct Investment Fund, Kirill Dmitriev, the Russian legislation in the sphere of PPP has already been sufficiently developed and it allows structuring projects at the level of the best international standards, guaranteeing investors adequate protection. The concession legislation is particularly good in roads constructions, whose experience is suggested by Dmitriev, to transfer to other infrastructure sectors. In his opinion now it would be more appropriate to talk about the fine-tuning of the entire investment environment, that is the further development of several aspects of not only concessionary, but also tax and budget legislation, what the government is now paying much attention to[21]. A similar opinion was shared by one of the experts in PPP legal issues during the Russian PPP week 2018 according to whom what is necessary now is to leave the market to digest all the legislative norms recently written and introduced. Once all current amendments become the integral part of the PPP law, only time should be given for the market to start to mature and to work.

The PPP law, equally to the concession law, provides for the closed list of what could be the object of PPP agreement, with some minor differences though. Thus, such infrastructure objects as thermal energy sources, heat and water supply objects as well as subway and highways (except for the private ones) have been excluded from the PPP possible object list. However, communication lines, underwater and underground technical facilities, private highways, aircrafts, artificial islands, stationary or floating platforms and ameliorative systems have been included into

[21] https://www.vedomosti.ru/economics/characters/2018/05/23/770510-fondi-gotovi

the list. The main stages of concession project preparation and implementation in Russia are similar to those found in international practice. These are:

1) Project initiation
2) Project preparation
3) The decision to sign a concession contract as being the best solution for the particular project
4) Selecting the concessionaire
5) Commercial closing
6) Financial closing
7) Project implementation

The duration of PPP projects varies from one year to 49 years. On average PPP projects in Russia are designed for a period of 10 years. The minimum cost of a PPP project is only 60 thousand rubles (800 euro), and the maximum - 193 000 000 thousand rubles (2,5 bln euro). Most of the existing projects now cost 50 million rubles (650 thousand euro). The higher the project cost, the more time it takes to implement it (Trofimova 2014). The projects of more than 1 billion US dollars require additional efforts from the state in terms of risk guarantee in order to reach financial closure (Shabashevich 2011).

Considering that in Russia in the total amount of expenditures for the creation and operation of infrastructure facilities, extra budgetary funds range from 2% in the social sphere to 10% in the transport sector, the importance of government involvement in creating favoring conditions for private party participation in PPP initiatives through provision of all kinds of assistance (financial, legislation, ensuring qualified personnel, provision of quality specifications, supervision of the final result) acquires even major urgency. Public active involvement in PPP project is justified not only by the private sector need in being incentivized and supported, but also by the simple fact, often overlooked by PPP opponents, that public partner remains the one who bears ultimate responsibility and is judged by the community for the quality of public services provision and public welfare in general, besides in the majority of cases remaining the owner of a newly created (or refurbished) infrastructure facility.

Social rights and societal wellbeing is an ongoing responsibility of the public sector, ensured by effective monitoring (Chung and Meissner 2011). Chizhevskaya et al. speak about the state as the protector of public interests and needs from the legal point of view (Chizhevskaya and Magomaeva 2014). Moreover, rules setting function and its enforcement can be ensured only by the government, which remain its main responsibility (Jutting 2009). Provision of regulation and its enforcement by the public sector also guarantees the general health system aims are achieved

and overall society interests are respected, with each party abiding by the fair game rules, what is in line with the best traditions of classical economy started by Adam Smith.

The current state of always more globalizing world economy not only challenges the old roles and functions of state authorities, but also spurs the employment of so far unknown to them tools and methods of collaboration with the resourceful private partner in the constantly evolving economic and social contexts. On the one hand, globalization envisages partnership, on the other, partnership encourages globalization processes, therefore, PPP and globalization are two faces of the same coin. PPP is commonly recognized as an international tool and international organizations actively invite the world community to develop partnerships. This invitation for PPP implementation is particularly vigorous in transitional countries, like Russia.

Moreover, the desire of Russia to align its policies, tools and processes with international trends and best practices is argued to be the most influential factor facilitating partnership development (Mouraviev 2012). The role of international organizations is especially visible in providing various training courses for the public party personnel, assistance and consulting sessions to national PPP centers in legal, financial issues as well as documents drafting and recommendations in tender organization in order to raise the PPP projects' potential in Russia (United Nations Development Program, 2009).

It will be unwise to try to hide the fact that the market dynamics in PPP projects has slowed down in 2017 as compared to 2016 – it has almost halved. But as it was noticed by the executive director of the National PPP Development Center, Tkachenko M.V. during the Russian PPP Week 2018, this decrease was majorly due to the decision made by the heads of municipalities that concerned only the utility sector and only small concession agreements, that would be more correct to call lease contracts rather than concession. What is more, utility together with housing are considered to be two sectors, low quality and underdevelopment of which have always been impeding the country's economic development, at the same time actually triggered the PPP development in Russia in general (Mouraviev 2012). PPP financial volume of PPP projects for the same period remained almost the same: there has been registered only a slight decrease, what allows us to talk about a kind of stagnation in a certain sense. Meanwhile, till 2014 one could have observed a stable growth tendency on the PPP market in Russia. Accordingly, observing such dynamics, we might conclude that PPP mechanism, though with some impediments, is steadily gaining momentum at the territory of the Russian Federation.

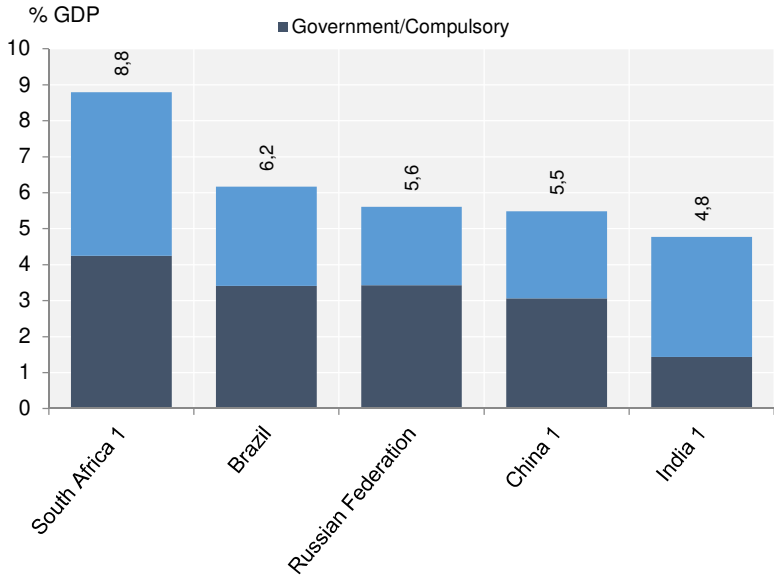
2. Healthcare system in Russia: its readiness for PPP

One of the main prerequisites for health PPP projects to be viable within one nation's healthcare system, as well as one of its strong points attracting the government to implement it is its close fit with the healthcare system reforms. One the one hand, implementation of PPP health projects should be a part of the national comprehensive program aimed at overall healthcare improvement and be aligned with the country's wellbeing needs. Otherwise, if not incorporated into broad health system perspectives or, even worse, contradicting the basic principles of the country's current healthcare system and, what is more important, unable to find the population consent, indispensable for the fulfillment of the capital intensive project where the tax payers money is involved, not only the PPP initiative is at risk, but the government reputation as the main advocate of citizens' interests is jeopardized (Ng and Loosemore 2007). On the other hand, the pressing needs for higher quality, better managed and technologically more advanced provision of healthcare services coupled with growing budgetary deficiencies in infrastructure funding perfectly matches the PPP philosophy of involvement of the private party's financial resources as well as its managerial acumen without surrendering though the government's ownership of the socially important infrastructure and the right to establish the rules of the game in such socially sensitive field.

According to the concept of development of public health and medical science adopted by the State Duma of the Russian Federation, health constitutes the most important value both for an individual and for society as a whole. It should also be noted that Russia belongs to a small number of countries that spends on health care significantly less than it can afford. According to the Bloomberg agency, Russia is not only allocating little money for healthcare – but it is extremely inefficient in spending it. If we look at the Russia's health spending numbers and compare them with the rest of the world, it definitely does not appear in best light. One of the most common ways to evaluate the nation's health care spending and compare it with other countries, during the particular period of time, is to see what percentage of the gross domestic product (GDP) it makes. For instance, the average OECD-35 health expenditure over the past few years is about 9% of GDP, after a period of rapid growth due to the economic recovery of the 1990-2000s. In Russia, this value amounts to 5.6% of GDP in 2015, which is 38% less than the OECD average[22]. If we compare the percentage to GDP spent on healthcare in Russia with BRICS nations, though, it appears to be in much better situation, occupying the median position (OECD, 2017) (See graph № 5).

[22] Expenditure on health in 2018, according to the Ministry of Finance, will amount to 4.1% of GDP, while in 2016 they accounted for 3.8%, as it was reported by the Russian President Vladimir Putin at an annual press conference.

Graph № 5: BRICS nations healthcare expenditure as a % of GDP



Note: Expenditure excludes investments, unless otherwise stated.

1.Includes investments.

Source: OECD Health Statistics 2017, WHO Global Health Expenditure Database. Proper elaboration.

The healthcare system in Russia is based on a number of legislative acts designed to ensure its integrity, comprehensiveness and quality of medical care standards. The Russian Constitution guarantees (article 41) that all medical care provided in public facilities is free of charge covered by public financing. Basing on the principal articles of the Russian legal system (art.9, 10, 12, 13, 14), the following emerges: The Supreme Council of the Russian Federation determines the main directions of the federal state policy in the field of protecting the health of citizens, adopts the law and approves federal programs for the protection of public health; approves the republican budget of the Russian Federation, including those related to health care expenditure, and controls its implementation. In the Russian Federation the structures of presidential power assume leading role when it comes to making decisions on societally strategical issues. That is why, it is the President of the Russian Federation who manages the implementation of the federal state policy in the field of protecting the health of citizens, at least once a year submits to the Supreme Council of the Russian Federation a report on the state of health of the its population. The Government of the Russian Federation implements the federal state policy in the field of protecting the health of citizens, develops, approves and finances federal programs for the development of public health; within the limits prescribed by law, coordinates the activities of government bodies, as well as enterprises, institutions and organizations in the field of health protection, regardless of the form of ownership.

The established model, on which public healthcare system in the Russian Federation is based, according to the financing method, can be defined as mixed budget-insurance one. Its budgetary component is provided by means of the state budget (federal plus regional), while the other extra budgetary health insurance component is provided through obligatory social medical insurance (OMI) complemented by the voluntary private medical insurance (VMI). Among principal sources of healthcare system funding are budgets of all levels; funds destined for compulsory and voluntary medical insurance in accordance with the Law of the Russian Federation "On Medical Insurance of Citizens in the Russian Federation"; the resources of trust funds intended for the protection of public health; and funds of state and municipal enterprises, organizations and other economic entities, public associations. The management of the system is performed at three levels – federal, regional and municipal, with each level responsible for certain tasks and authorized to act in conformity with normative regulations. Current system of medical care organization has some traits of historical Semashko model, the legacy of the former USSR. The system that was founded in the early 1930s and which was the first to deliver universal health coverage free of charge for all its citizens (Semashko 1934).

One of the peculiarities of the current moment for the Russian healthcare system is its organizational restructuring, characterized by the presence of multiple types of medical care. During the Soviet period, when the state provided for all the citizens' needs, the state health care system was the only existing one. Currently, there are three functioning, mutually complementing each other, systems of public health that are provided for by the Russian legislation: state, municipal and private. The development of municipal and private health systems along with state was fostered by the consolidation in 1993 of relevant legal norms in main Legislation acts. It should be noted that the functioning of the three health systems in the country is currently justified, since it helps to improve the quality and expand the market of medical services provided to the population in the conditions of development and improvement of the system of compulsory and voluntary medical insurance. Thus, along with the basic budgetary insurance health system, new models of medical care for the population are emerging, primarily, those belonging to the private sector.

The private health care system includes medical-preventive and pharmacy institutions, whose property is privately owned, as well as individuals engaged in private medical practice and private pharmaceutical activities. The activities of private health care institutions are carried out in accordance with the legislation of the Russian Federation, regulatory legal acts of the subjects of the Russian Federation, federal and regional health authorities and local governments. Nowadays, the most popular and most easily commercialized services of the private health providers can be found in obstetrics and gynecology, dentistry, and all kinds of ultrasound

diagnostics. The percentage of private companies' participation in the obligatory medical insurance segment in Russia is constantly growing: starting from 7,6% in 2010, reaching 21% in 2014 and arriving at 29% in 2016. This growth, according to the KPMG experts' estimations, is destined to continue – because, in the conditions of reduced real disposable income, the private healthcare operators need to seek additional sources of revenue. This trend will be observed not only in large cities and regional capitals, but all over the Russian territory.

Participating in public-private partnership within the obligatory health insurance system projects can be one of the possible and available nowadays alternative sources of income for the private company. As it has been reported by the Institute for PPP development, healthcare sector in Russia accounts for 10% of the total volume of private investment attracted for PPP projects and, therefore, considered one of the most dynamic in this field. One of the major reasons, mentioned by KPMG, that was holding back PPP investment projects before, besides general unfavorable macroeconomic conditions, was the high cost of debt on the Russian financial market. But even despite the before mentioned obstacle, PPP investment projects in healthcare are still being executed. As to the end of 2014 62 projects in 25 regions of Russia were being implemented on the basis of the Public-Private Partnership, in only 4 years this number has almost doubled, reaching in 2018 110 projects in 35 Russian regions. The imbalance of PPP projects geographical distribution remains quite evident: the majority of PPP health projects are concentrated in the Western part of Russia, with Samara region, the Republic of Tatarstan and Moscow region being the leaders in the total number of projects.

The Russian healthcare system is characterized by an extensive network of health treatment and prevention facilities, mentioned above, by the big number of beds for inpatient treatment and large number of doctors. Though this available resource potential of the industry is used with low efficiency, because the average length of stay in a hospital bed is about 2 weeks, having already considered a 5 days cut from 2000 till 2015, while across OECD countries this index in 2015 was about 8 days (OECD 2017). The system, from the point of view of the basic organizational principles of the medical care provision, didn't change a lot from the Soviet era times. In Russia, the number of beds is determined basing on the administrative subordination, according to which a hospital can belong to a republican, regional, city, or a district type. Therefore, if compared with other European countries the higher percentage of the population is provided with hospital beds and medical staff.

Eastern Europe was famous for its relative oversupply of physicians and higher availability of hospital bed capacities compared to the West (Jakovljevic 2013). Even though Russia was a kind of exemption of this general trend, because of Russian tradition of authorities' regular check-ups of hospital utilization indicators such as bed occupancy rate and the department eventual

closure in case of low indicators of bed occupancy (Atun et al. 2005). High rates of provision of the population with hospital beds is combined with a longer duration of in-hospital stay. High rates of provision of the population with doctors is often combined with little motivation and enthusiasm on behalf of the underpaid doctors, whose salary is 30% less than of an average worker of any industry in Russia. While in OECD countries the remuneration of doctors, both general practitioners and specialists, is much higher than that of the average worker: this income gap varies from 3 times the average wage in the country (Austria, Canada, UK, France) to six times the average country's wage (Belgium and Luxemburg) (OECD 2017).

Approximately 30 million patients pass through Russian hospitals every year. The imbalance of cost of certain types of medical services in the financing structure, where in-patient hospital care makes up 64%, demonstrating its absolute priority, creates significant burden to the Russian health system. But recently the Russian government has set the goal to change emphasis from treatment to prevention, that is why the availability of hospital beds is gradually decreasing. Over the past three decades all BRICS countries have been attempting to move to a more preventive oriented public health system, with diverse rates of success though (Coovadia et al. 2009). The Russians as well start to recognize health as a socially significant aspect of well-being, and, therefore, people give major importance to preventive care than they used to in the past. This trend is in line with the overall European situation, where it is commonplace to find the total number of available hospital beds being reduced across most of the EU Member States.

The overall social trend of shifting to a more individualistic approach to a proper health rather than previously practiced state paternalistic one, typical of the Soviet Russia together with the citizens' willingness and possibility to pay for a medical service of a good quality is observed in modern Russia. The demand for quality healthcare is destined to grow in Russia, as well as the number of people ready to pay for the healthcare services of good quality. It was also confirmed by the executive Vice President of Gazprombank, Chichkanov A.B. who during the Russian PPP Week 2018, was underlying the growing popularity and, what is most important, economic viability of PPP healthcare projects in Russia, by putting together public money, i.e. region assistance, assistance of the Obligatory Medical Insurance fund and money coming from the private market, i.e. money of Voluntary Medical Insurance and/or paid services. Gazprombank already has a couple of healthcare PPP projects in its portfolio, he added[23].

Healthcare entities in Russia in order to provide diversified services and perform multiple medical functions are usually distinguished according to their profile, i.e. specialization. The most commonly mentioned are health treatment and prevention facilities, the so called LPU (lechebno-

[23] Plenary discussion: Spatial development 2024: Infrastructure determines economic growth.

profilakticheskie uchrezhdenia) in Russian, sanatorium and resorts, motherhood and childhood protection units, pharmacies, medical industry enterprises and educational and research centers. Health treatment and prevention facilities in the Russian Federation embrace two large groups: hospitals (inpatient) and policlinic/ambulatory institutions (outpatient care) which in their turn comprise other healthcare divisions.

In order to improve the continuity of healthcare facilities, in particular between hospitals, the Russian healthcare system has been undergoing some reforms, aimed at creation of norms regulating and fostering development of highly specialized health providing facilities. That is why, we can say that here Russia also follows the trend of the European wind of changes in the healthcare service provision sector. The modern system of hospital care should take into account not only high level of specialization but should be provided with the latest technology, usually expensive one. There is an undeniable link between the high level of the service process and the good outcome of the treatment, as well as close interdependence between health financing levels and final health indicators. Therefore, first, Russia, must urgently find new sources of health financing and, secondly, it will be always more interested in foreign investors capacity to provide it with the modern, cutting-edge medical equipment together with the latest expertise in this field.

The issue of reforming of healthcare system in one or another way has been raised by various public authorities in different contexts. On November 16-17, 2016 the fifth Social Forum was held in Moscow, where its participants, representatives of government bodies and NGOs were discussing the urgent issue of meeting key social obligations under the new economic conditions. Among other things, the initiative of the Ministry of Finance of the Russian Federation to significantly reduce the volume of free medical assistance to the population was presented, which triggered not little controversy and debates. In fact, the issue of reforming of the healthcare system, or, to be more precise, reforming of its financing mechanisms, has been maturing for a long time. Obligatory medical insurance was conceived as a temporary, and to some extent desperate measure in the conditions of severe political and economic crises and budget deficit. It was thought to provide a new funding source for healthcare, but it did not really resolve anything, because, first, the established premium amount (3.6%) was not enough to improve accumulated healthcare problems, and, secondly, this step was accompanied by decrease of government financial support (Rozenfeld 1996).

The problem is that there has worked a well-known Russian saying that there is nothing more permanent than the temporary and the OMI has given deep, branched out to a lot of insurance organizations roots. In 2017 there were 44 companies and their 209 branches in 85 subjects of the Russian Federation and in the city of Baikonur operating in the OMI market, with no real competition between them, that could be hardly called insurance. No competition has arisen

between medical organizations either (the number of which amounted to 9142 in 2017)[24]. Thus, the insurance schemes exist more as a wish than as practical realities (Rozenfeld 1996). To eradicate the system, that favored the waste of huge amount of money "entrapped in numerous medical organizations and insurance companies, even after the country seems to have risen from its knees, has proved to be a very tough task" (MedRussia.org).

The question of obligatory medical insurance was also raised in the beginning of 2018 at the meeting in the Ministry of Finances, where there were also representatives of the Central Bank (that regulates the insurance market) and representatives of major insurance companies. The participants drew their attention to insufficient role of insurers in the OMI process: they just intermediate cash flows. Participants of the meeting agreed that the health care payment system in Russia needs reforms, which were proposed to be tested in several pilot subjects. Actually, the issue of the necessity of OMI reforming was raised both in the Federation Council and in other government bodies. It has also been reminded that crisis of the 90's passed and changes, radical ones, are needed. The very existence of obligatory medical insurance is an inefficient waste of resources and can not be called insurance in general, because there are no contributions, no fund, no real competition of the organization for a living person.

In fact, the debates about the functions and the role of insurers in the system of OMI continue since its inception in its present form, since 1993. Now, the range of activities the insurance companies are authorized to perform (the redistribution of funds from the OMI and the issuance of fines for medical organizations) does not allow to classify the system as a whole, from the economic point of view, as the insurance one, and in the near future the cardinal reform of the system should not be expected either. Complete transition to new principles, if it happens, will take at least five to seven years. In this case, the main innovation will be the redistribution of financial responsibility to insuring companies, which at the moment they don't have.

OMI, a single-channel funding system was introduced in 2010, becoming the main source of money in the Russian health care. The budget of the OMI fund this year amounted to 1.7 trillion rubles (25 bln euro) (general health budget, including OMI, is 3 trillion rubles (40 bln euro)). This money is paid by every Russian citizen - 5.1 percent of the salary every month. The financial scheme of the Russian Obligatory Medical Insurance System is quite simple. First, the state collects money from employers. Most employers calculate the rate of FOMIF (Federal Obligatory Medical Insurance Fund) at the current rate of 5.1%. For these insurance premiums, the maximum value is not established: regardless of how much the employee earns each year, the payment for health insurance must be made. Then the state transfers money to the FOMIF for non-working

[24] Federal Fund of Mandatory Medical Insurance (in Russian), retrieved August, 17, 2018. http://www.ffoms.ru/system-oms/

citizens. After that, the money collected by the state go to private (commercial) insurance companies. Even if some of them have quite a friendly interface and are generally quite professional, but in essence their job is reduced solely to distributing the funds collected by the state to state-owned, mostly health and recreational facilities. The scheme at first glance was built up reasonably: the Federal Fund redistributes collected resources to territorial funds, which then go to the medical insurance companies. The latter, in turn, transfer money to hospitals based on the quantity of provided services, thus respecting the principle: “Money follows the patient”.

The system, organized in such a way, probably could have worked, if it was not for “losses” of considerable amounts of money during the passage from the Federal Fund to the final patient health provider, i.e. hospital (14%), that according to some estimations reach 238 billion rubles (3bln euro). Therefore, measures should be taken: only in 2015, the OMI system, according to the Accounting Chamber, "lost somewhere in the middle" more than 30 billion rubles (400 mln euro). They were spent on the services of "insurance intermediaries" who simply did not fulfill their obligations. Moreover, a new, insurance scheme based component immediately became the source of additional bureaucracy with high concentrations of underqualified personnel (Rozenfeld 1996). As a payment for the costs of conducting their business, 1% of the obligatory health insurance budget is transferred to them. Another portion of profits to insurance companies arrives from the amount of fines they charge hospitals for improper provision of medical care (from 15 to 25 percent). In 2015, for example, only insurance medical organizations received 19.2 billion rubles (250 mln euro) for their activities.

Indeed, the existing health insurance system has been recently bitterly criticized by Federation Council Speaker Valentina Matvienko, calling such a system “vicious” and stating that it need not to be reformed – it must be completely eradicated (MedRussia.org[25]). She also admitted that OMI system in its current state is fairly criticized also by health professionals and citizens, adding that it can not be even called an insurance system. Privately owned insurance company is nothing else but a small office that receives money from the federal budget and transfers it to the hospital account, taking obviously a not high, but still a percentage for its useless service, the system that can hardly be called an effective one, “a gasket for pumping the citizens’ money” in her words. She suggested that only voluntary health insurance should be left, and funds for compulsory health insurance should be allocated in federal and regional budgets, bypassing various unnecessary funds. It is worth noticing though: the higher the share of state financing of healthcare system, the higher is the citizens’ satisfaction with healthcare quality (Tuohy et al. 2004). The countries of North Europe and Great Britain are good examples, confirming this rule:

[25] https://medrussia.org/14845-valentina-matvienko-strakhovie-kompa/

state health expenditures make up more than 80% and the population level of satisfaction with the healthcare quality is about 70-80%, one of the highest among OECD countries (Leatherman and Sutherland 2005).

By way of summing up, the overdue reform of the healthcare system has recently become the highly debated topic for the Russian administration and painful one for the Russian citizens. A lot of problems of the Russian healthcare system are said to have their roots in the "political model of state paternalistic social system development", accepted by the majority for decades, where the state was the main health provider, sponsor and manager, while the citizen was perceived as a passive, often irresponsible consumer of health services (Rozenfeld 1996). There are many problems in the health care system that could not be solved simply by providing more funds. It's not only funds that Russia needs, but it's also about human capital, the competent qualified managing staff, who will be able to turn the healthcare reform into the right direction, based on previously studied and analyzed errors, as well as well-prepared valid projects and other countries' successful experience.

Different policies are being currently implemented which are aimed at resolving numerous problems of the Russian healthcare system. One of them consists in diversification of activities, providers and development of new approaches to the delivery of services, including services provided on a fee-for-service basis. PPP approach with its project finance arrangement in the center of the model, is, in fact, a new method of delivering conceptually the same, services, but of a much higher quality, because paid and explicitly demanded by the patient-client-citizen. There is a number of healthcare reforming principles that are widely accepted in Russia. Among them there is transition to a financing scheme under which payments depend on the quantity and quality of provided services; as well as development of voluntary insurance schemes and "fee for service" (direct payment) for health care. Both of these basic principles are echoing with the fundamental principles of PPP, especially with the immediate economic interest of the competent private party involved in project preparation and execution.

Due to certain peculiarities of the way healthcare system in Russia has been historically organized, and due to a specific mindset and value system of the Russian people, the passage from the old state-paternalistic to a free market with autonomous health providers and users (especially in such politically and socially sensitive field as healthcare delivery) can neither happen overnight nor should it be done without state solid supporting shoulder. In fact, in some cases government collaboration with a private partner within PPP framework in healthcare field in Russia is subject to meeting of various strict conditions. Thus, as it was declared by the Director of the Department of Infrastructure Development and PPP of the Ministry of Health of the Russian Federation, Kazutsin A.V. during Russian PPP week 2018, for the implementation of socially important and

capital intensive healthcare projects, the government will collaborate only with the private investor who has his proper capital, not borrowed from the bank, (calling the latter modality a "suicide" from the state point of view). There has also been underlined the need to develop appropriate policy by the Ministry of Healthcare regarding PPP healthcare projects. This necessity is explained by presence of a large number of questions, the answers to which can be provided only by the state, therefore, regulating role of the State is absolutely required.

The monitoring and supervisory function of the State is of paramount importance for any country undertaking PPP initiative, but it is even more so for low- and middle-income governments, "where this capacity is sometimes fragile" (PwC 2010). It is of critical importance for Russia also because of two factors: the initial stage of PPP mechanism evolution and Russian's historical and social background. Moreover, monitoring activities should be carried out by an independent entity in order to ensure sustainability in the partnership. The government's role is of significant importance also in the light of a recently emerged concern and clearly expressed fear, because of a growing number of PPPs, regarding the possibility of abdication of state responsibility to provide public goods (Schäferhoff et al. 2009). Even though the latter is a tendency more typical of the developed countries where PPP has already given its deep roots, not in Russia, at least for the moment, with its strong soviet state paternalistic legacy. Regulating and controlling functions of the government were also stressed by Gazprombank executive Vice President, Chichkanov A.B. during the Russian PPP Week 2018, while talking about integral role of the State whose presence in PPP projects of any sector is of significant importance, but even more so for the healthcare PPP undertakings[26].

In the conditions of always growing social pressure on the Russian economy accompanied by budgetary deficits the state can't but address the private party for managing the always growing demand for social services in the proper way and at the appropriate level. Given the significant gap between current healthcare spend and international norms, Russia offers potentially attractive opportunities for investors (as well as operators). In addition, interest in developing privately provided, at least partially, healthcare services, is high in Russia, because it can significantly improve the quality of care delivery, to control spending and, what is important for such countries as Russia, at the same time to remain the state property.

Participation in PPP initiative will be interesting also for the investor, because this tool will ensure him a stable, though probably not very high return on investment. Moreover, considering the degree of depreciation of fixed assets of healthcare infrastructure, which is estimated to be about 57%, the development of PPP in this sector is unavoidable. The National PPP Development

[26] Plenary discussion: Spatial development 2024: Infrastructure determines economic growth.

Center on behalf of its Board Chairman, Seleznev, P.L strongly believes in the attractiveness of healthcare for investor despite its belonging to the social sector. The Center made this conclusion basing on the witnessed by them increase of interest in healthcare projects on the part of big private investor during the last 4 years even in the conditions of nowadays (imperfect) legislation[27].

One of the modern trends that characterizes the global PPP market consists in the following: PPP projects are used in the healthcare sector not only to deliver infrastructure projects (e.g., new hospitals, staff accommodations, residences, etc.), but also to provide specific services (e.g., energy management schemes, information technology system, catering, integrated management system, etc.) (Akintoye and Chinyio 2005; Blanken and Dewulf 2010). PwC also observes this trend, noticing that PPPs are now delivering far more than buildings (PwC 2010). It becomes clear that infrastructure PPPs are rapidly expanding the market for private capital and expertise in health, though these landmark deals remain largely dominated by infrastructure projects.

This global trend of PPP projects' delivering not only physical infrastructure facilities but also multiple related services is still very early to apply to the Russian PPP healthcare market. There is a well perceived lack of professional operators in all sectors in Russia, as outlined by experts, let alone, the healthcare, the one that received an impulse for development quite recently. The absence of private partners with competences in healthcare system in Russia constitutes a problem for both the private party, and even more so for big investors willing to enter the healthcare PPP market.

Despite the predominant role of the private agent in delivering a physical structure of the facility within the healthcare project, rather than providing various non-health services (as it usually happens in Europe and other PPP developed countries), there is still quite a wide range of unexplored opportunities for the private party in the Russian healthcare PPP market, at least in theory. There are two federal laws regulating procurement of goods, works and service for the provision of state and municipal needs by certain types of legal entities. This private legal entity can enter into a contract for laundry service provision, food/meals organization, removal and utilization of biological waste, repair works, laboratory diagnostics services. The opportunities for the private sector to provide services, at least for now, are only theoretical. In the social sector there have traditionally been scarce number of qualified operators who are ready to become partners in PPP project, to provide the social infrastructure object, to manage, to operate it and later provide social services to the population. There are really few big, financially solid and, what

[27] Panel Discussion: "Social Structure Development: From needs assessment toward new quality of life", The Russian PPP Week 2018.

is more important, professional operating companies on the Russian market, according to the Board Chairman of the National PPP Development Center, Seleznev, P.L.[28]

A critical point in PPP operations in the healthcare sector is represented by the management of non-core services. It has been ascertained, at least for Italy, that management of these services entrusted to the private operator involves an excessive increase in costs as it presents elements of complexity from the technical-economic point of view difficult to manage by the SPV. It is well known that the main role in PPP initiative is usually given to the SPV, the construction company, which does not have necessary skills for the management of these services and, thus, having to resort to third parties. A further problem related to the management of these services concerns possible changes in market prices, which requires a revision of the contract and of the economic-financial plan. This also involves the concentration of contractual powers in the hands of the few global contractors in prejudice of local operators, who are entrusted to manage these services. This is due to the fact that, on the one hand, there is an oligopolistic market, that of the PPP global contractors and, on the other, a more fractional and competitive local market. That is why, Vecchi suggests application of a PPP model in which the management of non-core services by the private party is implemented only in cases in which there is an effective calculated convenience of doing so, the model that from strictly economical and rational point of view has all the reasons to be supported and, eventually, to be opted for (Vecchi n.d.).

According to the concept of development of public health and medical science adopted by the State Duma of the Russian Federation, one of the priority policies in the healthcare sector is the creation of conditions fostering the development of PPP policy for its further implementation in the provision of public health services. These conditions include gradual demonopolization of the state system of medical services provision to the population together with reforming the system of control and surveillance functions as well as standardization of medical services. Main motivations for the government to attract private party into the healthcare projects don't differ from other sectors: the need of private finance and human capital inflow, appropriate risk allocation, cost and time efficiency. Moreover, social sphere, including growing life expectance, active ageing, and therefore, availability and quality of social infrastructure objects, has acquired unknown before importance in Russia. In view of the above said, even though the PPP in transport and utility sectors, i.e. economic infrastructure, are absolute leaders in Russia, as in any other country that is quite new to this infrastructure implementation approach, the interest in the social infrastructure on the behalf of the private partner is evident.

[28] Panel Discussion: "Social Structure Development: From needs assessment toward new quality of life", The Russian PPP Week 2018.

PPP, generally speaking, as a method of infrastructure project implementation has passed the stage of origin in a number of key infrastructure sectors (transport, water and heat supply, healthcare) in Russia. Among sectors, that has passed the origin stage, there is also social sphere, in particular, healthcare facilities and, to a greater extent those, within the framework of which services are provided with a high level of OMI tariff. There is growing interest to PPP mechanism on the part of business community together with the increasing experience gained thanks to always more PPP projects implemented in healthcare, resulting in increased competitiveness of PPP projects. PPP financing mechanisms are also, though slowly, but being formed.

At the same time the business is not interested in participating in infrastructure projects on purely market conditions, in particular in the social sphere, where investment attractiveness is even lower. This condition speaks not even about desirability, but necessity of government strong shoulder, including both financial backing as well as general well expressed will to collaborate and provide needed assistance in order to involve private partner into not particularly commercially attractive for him sector. Government, according to the Russian literature, should be extensively financially involved in the partnership, meaning that it should pay some portion of the project cost, or it should play the role of guarantor in a PPP project for the PPP mechanism to function correctly (Varnavskiy et al. 2010; Pankratov 2010).

In general, PPP projects in the social sphere are less marginal than projects of other spheres of public infrastructure: transport and utility, for instance. Financing of PPP projects in the social sphere is associated with significant difficulties due to the heterogeneity of demand, the complexity of predicting the consumer flow and the social impact assessment. However, about 80% of PPP projects in the social sphere are reimbursed through direct collection of fees from consumers and other commercial activities of a private partner. Projects in which commercial risks are divided with a public partner, that is, the state guarantees a minimum yield, amount to about 10%. The remaining 9% of projects are implemented through the mechanism of availability payment and, as a rule, in respect of pre-school and school education facilities (National PPP Development Center Report 2018).

The PPP projects in the social sphere differ from the projects in other sectors, transport one, for example, in that in other sectors the profitability is almost always comes from commercial activities. This “weak point” feature of the social sector could be converted, though, and seen as its attractive side for the private investor. It’s normal that the private party, the investor tries to negotiate with the public one for some kind of financial assistance, the minimal guaranteed profit, especially when the company has large-scale tasks. If in such social sectors, as education and social services the private party still manages to make profits out of commercial activities, for the large-scale, socially important projects in healthcare the government shoulder is a requirement.

The government assistance in PPP financing in Russia usually takes three forms: guarantee of the payment of the debt, capital grant[29] and the guarantee of minimum income (known in Russian as MGD). Mouraviev speaks about such types of government support of a PPP project as a subsidy to a private partner's capital expenditure, periodic payments to an operator, tariff subsidization (i.e., part of the tariff is paid by citizens, whilst another part is paid by the government), and the government guarantees for private partner loans and bonds (Mouraviev 2012). Another peculiarity of the Russian PPP health market is worth mentioning here. Talking about government assistance to the private investor, providing financial support, to be more exact, Director of the Department of Infrastructure Development and PPP of the Ministry of Health of the Russian Federation, Kazutsin A.V., strongly advised not to involve the tariff structure and to avoid attempts to change it in order to include various investment elements in it. He rather suggested, also in the long-term perspective, to bear in mind such tools of compensation of investment and, if necessary, operation costs, as minimal guaranteed profit or co-financing mechanism[30].

As one of the priority industries for the development and application of PPP mechanisms in Russia, underlined by experts is the social sphere, including healthcare provision. Social sphere occupies a large share of PPP projects approved in the Russian Federation. The National Center of PPP Development has distinguished two types of healthcare facilities whose potential according to the Center's estimations is high, one with a medium potential level and one with a low potential. Thus, specialized medical care and sanatorium/health improving care are two sectors with high potential for PPP implementation. The appetite for specialized healthcare institutions among PPP providers is determined by the growing needs on behalf of always more demanding and knowledgeable population, as well as government impossibility to provide the latest medical equipment and ensure equal access to all the citizens out of state purse, as a result of increasing social pressure on the Russian economy.

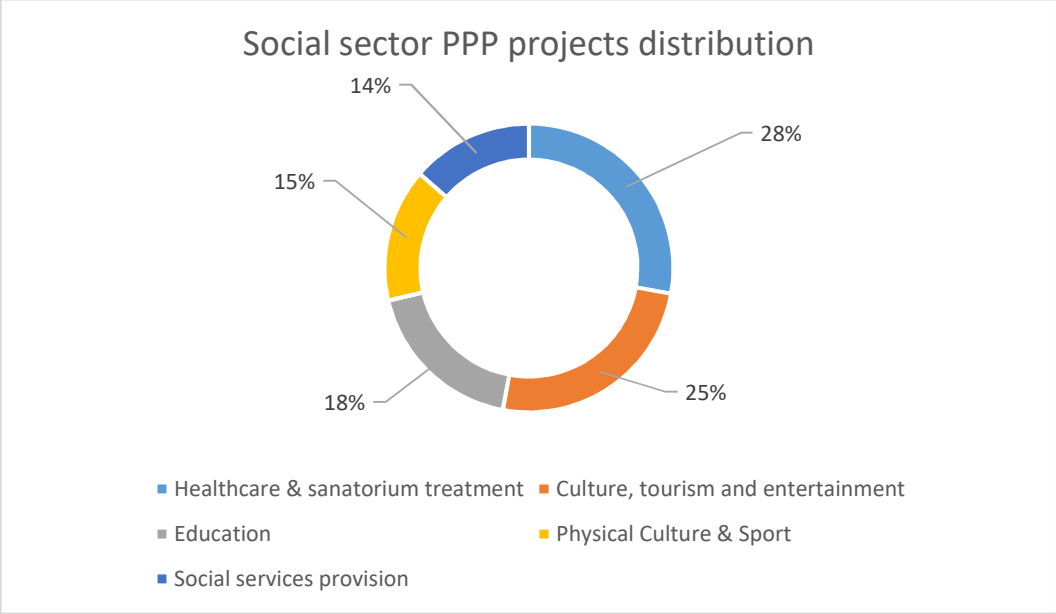
Moreover, while the first type of health facilities has quite rich experience in Russia in being executed by means of PPP method, for sanatoriums PPP implementation mechanism is completely unknown. Inpatient care (in-hospital) healthcare units (or just hospitals) are estimated to have medium potential level, while outpatient care (polyclinic/ambulatory) and medical care are regarded as low potential sectors for PPP development. The unpopularity of the latter can be explained by the gratis nature of almost all ambulatory patient consultations in Russia, guaranteed by the state, lack of need in highly technological expensive equipment, little room for introducing

[29] The government finances part of the cost of infrastructure facility creation at the investment stage.
[30] Session: "Social Structure Development: From needs assessment toward new quality of life", The Russian PPP Week 2018.

paid healthcare services in that context and, therefore, almost zero opportunities for the private party to leverage on its expertise and make profit and, therefore, the extremely low chances of its being attracted by this sector. Yet, though, the problem of the majority of Russian regions is the primary ambulatory (outpatient) unit, where the infrastructure creation lags behind the population growth and demographic trends.

The market of PPP projects in the social sphere is quite unstable. Despite the market situation, the number of PPP projects in the social sphere continues to grow: 368 projects now against 290 at the end of 2016. The volume of private investments in the concluded PPP projects in the social sphere amounts to 220 billion rubles (almost 3 bln euro). The majority of PPP projects is implemented in the health sector. Currently in Russia there are 400 PPP projects in social sphere at various stages of implementation, 368 of which passed the stage of commercial closing: 110 of which are in healthcare, 99 in culture, tourism and entertainment, 73 projects in education, 59 in sport and 54 in social services provision (see graph № 6).

Graph №6 Distribution by sectors of PPP projects in the social sphere



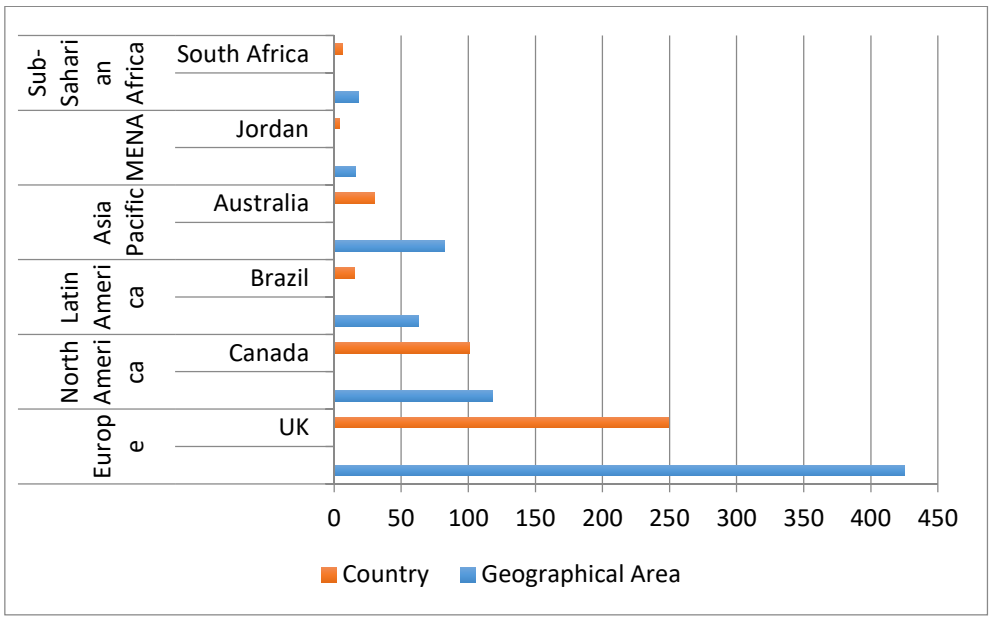
Source: National PPP Center, proper elaboration

Why did healthcare sector become the leader among other social services? The answer to this question has been given by the Board Chairman of the National PPP Development Center on Seleznev, P.L, who among necessary preconditions for implementing healthcare social infrastructure in Russia mentioned public support to the private investor and private investment

attraction, legislation fundamentals for the healthcare infrastructure construction and the absence of fear[31].

As it has already been noticed in the previous chapter on PPP in Russia, despite growing number of middle-and low-income countries exploring healthcare PPP projects, the exact number of these operations in healthcare sector is still very difficult to find in any official documents. The only reliable source possible to analyze was the Project Finance and Infrastructure Journal, even though as far as the PPP projects in Russia were concerned, the database provided patently erroneous numbers, giving only 3 PPP projects. Therefore, to get the most recent information another valid, this time, Russian database was consulted in order to have the state-of-art situation at the PPP health market in Russia. All the statistical information on the number of healthcare projects and its distribution over 6 world's geographic regions was analyzed and presented in the visually friendly graph (See Graph №7). Considering two diverse, though both reliable and authoritative sources of data, it deems quite difficult to make some solid comparisons and valid conclusions on the relative number of PPP health projects in Russia and the rest of the world. Therefore, I will limit myself to indicating the exact number of such projects according to these two different databases and present them in the form of charts.

Graph №7: World distribution of PPP projects in Healthcare



Source: The Project Finance and Infrastructure Journal, retrieved on August,15, 2018. Proper elaboration.

[31] Social Structure Development: From needs assessment toward new quality of life, The Russian PPP Week 2018.

The total number of healthcare projects implemented within PPP framework according to Project Finance and Infrastructure Journal, in Europe amounts to 425, in North America 118, in Latin America 63, in Asia Pacific 82, in Middle East and North Africa (MENA)16 and Sub-Saharan Africa 18. As shown in the graph, almost 60% of the 722 healthcare infrastructure projects, most of which are PPPs (see note [32]), are in Europe, followed by, though at a long distance, North America and Asia Pacific. More specifically, the scene is still dominated by the United Kingdom, which receives over half of European projects and almost a third of those worldwide, confirming the country's consolidated tradition in the construction of health infrastructures through project finance operations. The second largest PPP market in Europe is represented by Italy, with 29 PPP projects being undertaken, while the world second largest after UK market is taken by Canada, followed in its turn by Australia. South Africa and Jordan are leaders in their respective geographical regions – Sub-Saharan Africa and Middle East and North Africa.

The total amount of such projects in Russia is 110 (as to July of 2018), with 73 331 642 thousand rubles (1 bln euro) of private investment at the investment stage. The majority of projects (91), equal to 83%, is based on Law on Concession (Federal Law 115), 10 (9%) being within the most recently adopted Law on PPP (Federal Law 224) framework and 9 of them (8%) are regulated by regional law of respective region of the Russian Federation. The preference of concession as legal form is the trend observed not only in the healthcare, but in the overall PPP Russian market: 70% of all PPP projects took the form of concession agreement also in 2014, passing to 82,5% in 2017 (Chizhevskaya and Magomaeva 2014; National PPP Center Report 2018). PPP agreements, based on federal law on PPP, as well as regional legislation, are used to a greater extent for the implementation of infrastructure projects in the social sphere (health care, education). Regional Federal Concession legislation together with federal PPP law have proved to be the most flexible, less binding for the banks, and provided for a greater choice of PPP "alphabet soup" models and, therefore, preferred by the majority of private partners, when they can choose. It is worth mentioning that even a larger portion of investment is made by means of the so called "lease agreements with investment commitments". It is due to the fact that the lease agreement is considered by the investor a simpler form of agreement with the public authority (from the point

[32] The IJGlobal database provides detailed information on financial structure, policy, pricing and players influencing infrastructure transactions and trends, which together provide insight into healthcare PPP maturity across geographic region based on the volume of assets by country. Data was filtered based on 'Social & Defense' and 'Healthcare' project sector and sub-sectors respectively. Limitations to the data: project/asset data may include non-PPP structured deals and does not include healthcare infrastructure projects that were initiated before 2007 that may currently be operational; data may also not routinely reflect changes in project status caused by changes in political party or national PPP policy that put projects on hold.

of view of project launching procedures and preparation costs). Such contracts are actively applied in the reconstruction of health facilities, tourism and restoration of cultural heritage sites.

Absolute leaders in PPP healthcare projects are the city of Moscow, the region of Moscow, the city of St. Petersburgh, the region of St. Petersburgh, Samara region and the republic of Tatarstan. In general, the majority of investment projects are usually located in Western part of the country as compared to the Eastern part of Russia, what can be explained by more dynamic economic activity as well as higher population density. Trofimova has also demonstrated the link between economically sound regions and the bigger number of PPP projects, what she presumed was due to the higher level of expertise of the administration and these regions' attractiveness for foreign investors (Trofimova 2014). If we take healthcare infrastructure projects implemented or being carried out within PPP framework, a similar tendency is noticed. The subjects of the Russian Federation with the highest potential for attracting infrastructure investors in PPP projects are St. Petersburg and the Republic of Tatarstan, which besides high investment attractiveness, also have extensive experience in the implementation of regional PPP projects and developed institutional environment (Storozheva 2016).

For the closing sentence, I consider it useful to refer once again to the Director of the Department of Infrastructure Development and PPP of the Ministry of Health of the Russian Federation, Kazutsin A.V. who during Russian PPP week 2018 underlined a commonly agreed upon, I would say, a well-known truth, the PPP model should be based on – the balance of interests, hence, not conflict of interests. In case of the latter, he warned, it will be always the private party who will lose, money and reputation. Therefore, he added, the winning business strategy for the private party in the collaboration with the public authority within PPP mechanism, would be "occupying blank spots", i.e. what the private partner is advised to do is to arrive and ask the region what it needs, in what fields the population wants the private investor to intervene, and not just coming where there is already the state that efficiently manages a certain field. In a country with 60% of infrastructure worn-out there is a plenty of such blank spots, as well as strong political will to collaborate with private investors, and financial possibilities to provide them with all necessary support.

3. Transnational PPP: importance and need of the foreign player on the Russian healthcare market

Russian actual infrastructure needs according to Global Infrastructure Outlook are estimated to be $59 bln[33], thus, revealing a significant infrastructure gap of $ 20 bn as well as substantial potential for foreign capital investors to play in filling this gap. The lack of infrastructure investment is capable just in a couple of years to affect considerably the quality of country's overall infrastructure, thus, throwing the country back in its economic development and decreasing its competitive advantage. Whereas Russian internal resources may suffice to satisfy its short-term capital investment demand, broader development of key infrastructure sectors is quite improbable without foreign investor participation. Moreover, foreign player might give a significant impulse for Russian PPP market development especially as it pertains to the enhancement of competition and expertise aspects of PPP project implementation. As fairly underlined by Ng and Loosemore, public infrastructure assets represent significant value for any nation, which effectively managed, not only favors country's economic, social and cultural stability, development and prosperity but also plays a critically important role in attracting foreign investment (Ng and Loosemore 2007).

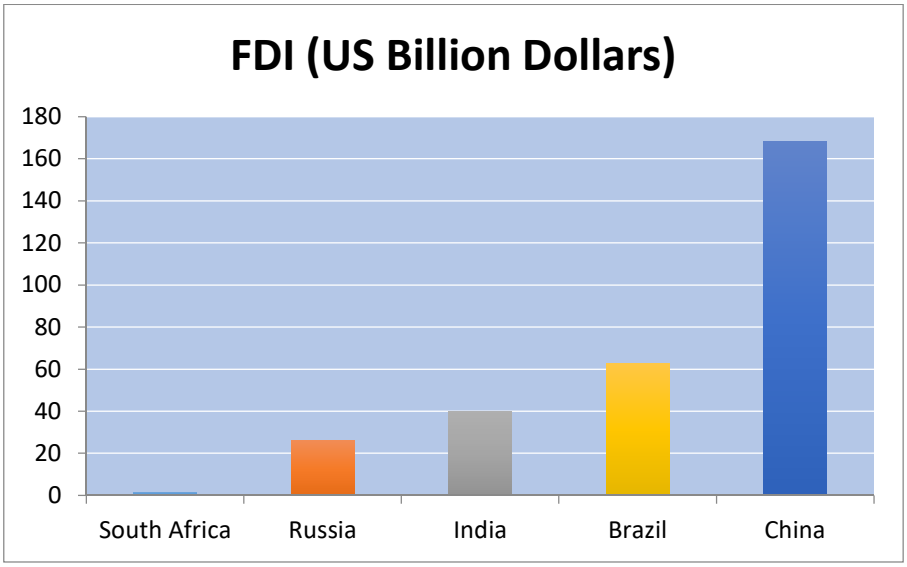
Foreign direct investment (FDI) can be one of the sources of the urgently needed foreign country's financial injections in particular for the project implemented with the project finance tool known for its long-term tenor, in case of country's low level of savings or short maturity or when country's savings are directed for other purposes (Öge and Bas 2016). To attract foreign players to the national infrastructure market has recently become a priority of many countries' infrastructure policies. It becomes even of a major importance for the developing world as well as BRICS zone countries, which Russia is a part of, where the infrastructure needs, because of high rates of economic development and demographic dynamics trends, are particularly salient.

If we add high rates of depreciation of capital stock of its major part of the infrastructure, particularly of transport, energy, public utilities, and social one, the need for major infrastructure investment becomes even more evident. Russia occupies an inferior position with respect to its BRICS colleagues in terms of inward foreign direct investment: 26 billion dollars of FDI for 2017, occupying the last but one place leaving behind only South Africa, what is also confirmed by Russia's relatively low share of FDI in the GDP (1.5%). While the general foreign investment dynamics of last ten years in Russia is in line with the other BRICS nations trend with periodic ups and down in correspondence with the major political and economic conjunctures on a national or international arena. Thus, the decline of FDI flows from 2014 followed the geopolitical tensions

[33] https://outlook.gihub.org/countries/Russia

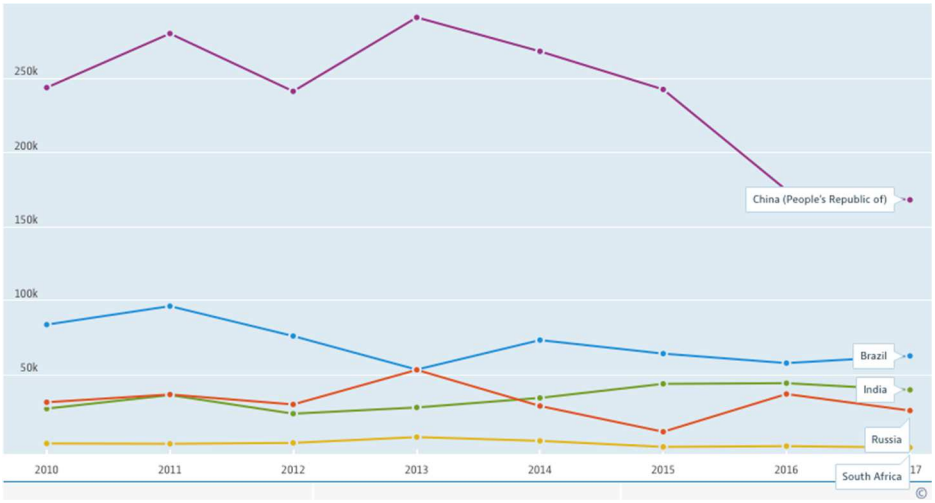
between Russia and Western countries because of the Ukraine issue, while a rapid increase of FDI that in 2016 reached 37,2 billion was mainly due to the privatization of the Rosneft oil company (See graph №8 and №9).

Graph №8: FDI in BRICS countries



Source: OECD (2018). Proper elaboration.

Graph №9: FDI trends in BRICS countries



Source: OECD (2018). Proper elaboration.

Developments in Eastern Europe and former Soviet countries provide new business opportunities for architectural, engineering and construction companies all over the world (Fridlin 1996). The world economy globalization and financial market integration have allowed the private sector actors participate not only in domestic PPP project, but also to invest in other developing countries' infrastructure needs, thus pursuing investment opportunities at the global market. Domestic work volumes may not be large enough to fully accommodate economies of scale and learning/experience curve effects of the construction company or it decides not to depend entirely on its own domestic market (Rebeiz 2012). The increasing demand for PPP infrastructure projects in developing countries creates new opportunities for the developed countries giving the latter possibility to invest, construct and make the most of this new business solution.

A PPP gives the opportunity for a developing or simply hosting country, which is new to PPP project delivery method, or which has little experience in constructing or operating large and complex infrastructure projects, to team up with international private concessioner for design, construction, operation, and what is of particular importance in the conditions of limited public resources, for finance, of a new infrastructure facility. While the construction company improves its competitive ranking, by exporting its core expertise, and diversifies risks across other markets (and takes advantage of lower labor costs), the host country can leverage on foreign company's cutting edge technologies, new skills and access to sophisticated know-how. The latter can be the case of Russia in particular, where construction market is not very well developed and as noticed by the senior vice president for infrastructure of the Direct Russian Fund, Sedov I.L. "this could be an issue", referring to the investor-constructor relations in the greenfield project, where the lack of trust towards local constructor can become a deal breaker for the foreign investor because of the so-called "risk of principle"(the principle of having a reliable construction partner)[34].

Growing opportunities, the globalized market provides for the numerous private companies, and the vigor with which they seize these opportunities against the background of running out budgetary financial resources, made PPP overstep the national borders, giving origin to transnational public-private partnerships. That might be one of the reasons of the increasing trend in publications on transnational PPP (TPPP) noticed by Yu et al. in the result of their systematic review of literature on critical risk factors of TPPP (Yu et al. 2018). The research program on transnational PPPs[35] is still at an early stage, as it was concluded by Schäferhoff et al. in the result of their research, which aim was to obtain conclusive knowledge about the emergence, effectiveness, and legitimacy of TPPPs (Schäferhoff et al. 2009). More empirical research was

[34] Session: "Foreign players in Russia's PPP market", Russian PPP week 2018.

[35] Transnational PPP, as defined by Schäferhoff et al, is a "continuous and relatively institutionalized transboundary interactions between public and private actors that formally strive for the provision of collective goods, whereas private actors can be for-profit and/or civil society organizations" (Schäferhoff et al, 2009).

claimed to be necessary by the authors to further specify the conditions under which PPPs emerge (idem). They also demonstrated that more empirical work is necessary with respect to legitimacy as well as in understanding who is the most influential decision maker in the partnership. Further research in institutional design of TPPP is also required because as their survey showed "the questions about the effectiveness and legitimacy of PPPs cannot be judged in general terms, but that their problem-solving quality and their legitimacy rather depend on their institutional design" (idem).

While nature and direction of international trade in construction depends upon the global distribution of construction activity as well as the distribution of wealth (Gunhan and Arditi 2005), the nature and distribution of infrastructure facilities depends on nation's needs, its government budgetary capacities and/or availability of financial engineering instruments. Direction and distribution of foreign investors in the PPP market of new to the investor country is determined by a wide range of factors, that can either attract foreign investor into the country or discourage him from doing that. Among advantages offered by Russian market to the foreign investor in general, abundant natural resources, its geographical position on the west-east crossroads, considerable volume of domestic market, economic growth rates as well as well-developed international communication infrastructure are usually mentioned (Valiullin and Shakirova 2004; Zimin 2013; Gonchar and Marek 2014). The before mentioned competitive advantages obviously remain valid also for the attraction of foreign investors into PPP Russian market, though, due to a more complex or, better to say, different from FDI mechanism, PPP framework, some additional factors must be considered by both sides before entering into PPP relation.

Bearing in mind that the investment environment attractiveness in general is determined to a large extent by the political and economic stability (De Marco and Mangano 2013), what Russia, unfortunately, not always can brag about, still the following should be noticed. Talking about investment attractiveness of the Russian PPP market for the foreign partner, four main points must be underlined. Firstly, the market capacity (the volume): for the numerous reasons, already mentioned before in this work, the projects from all the infrastructure fields will be in high demand in Russia. Market volume, together with benefits and risks, need to be evaluated and very thoroughly analyzed before taking a decision to enter the foreign market (Hastak and Shaked 2000; Nielsen 1997; Wang et al. 1998). Secondly, nowadays there are all necessary conditions present in Russia for the flexible implementation of various forms of PPP in all the sectors of economic or social infrastructure, with some subsectors (transport for instance) being a bit more privileged than the others (Law on Concessions №115 and Law on PPP №224). Moreover, as some studies have demonstrated, there is no need in the specific PPP legislation for the health sector, the projects can

be well based on standard generic legal provisions for PPP (EPOS Health Management 2013[36]). Thirdly, there is an adequate liquidity level of the Russian banks enabling them to become valid partners of the PPP agreement. Finally, the level of competition, more precisely, the presence of the foreign investors, on the Russian market is quite low. The latter coupled with quite underdeveloped Russian construction market, as well as the lack of infrastructure managing companies, especially in the healthcare sector, makes Russia even more attractive for foreign companies willing to become its strategic partner within PPP collaboration scheme. Russian exceptionally good market conditions (low level of competition and enormous unmet infrastructural needs as compared with Europe) for the PPP development have been confirmed and agreed upon by several PPP practitioners as well as legal experts during the Russian PPP Week 2018[37].

In Russia only 2-3% of investments come from the foreign investor, while the world's percentage of the same index is of 25%[38]. Attraction of foreign investments in the Russian economy can contribute to solve its several issues of socio-economic development. Among the most relevant for the Russian Federation now, mentioned by Fedotova, are the following:

- improvement of its scientific-technical potential;
- promotion of Russian products and technologies to the foreign market;
- expansion and diversification of export potential and development of import substituting industries in certain areas;
- promoting the flow of capital in labor abundant regions and regions with rich natural resources to facilitate their development;
- creation of new jobs and development of the latest production management organization forms (Fedotova 2011).

As various surveys and studies testify, investors themselves are becoming always more interested in infrastructure investments opportunities in Russia. Infrastructure is vital for economic development and direct foreign investments can accelerate this process. It is also true that competition for financing, competition for foreign capital has become global. When talking about capital, one, though, should bear in mind two types of capital: financial and human, both extremely important for any country's development in any economic-social field. This double faceted capital paradigm is of even major importance when we talk about Russian emerging PPP market where

[36] The study report only two countries, Portugal and Italy, that have specific PPP enabling legislation for the projects in the health sector.
[37] Koval I.U. the Head of the Department of Foreign Projects and International Collaboration "Russian Railways", Revzina O.V. partner of the International Legal Company Herbert Smith Freehills (Session: "Foreign players in Russia's PPP market", Russian PPP week 2018).
[38] Session on "Conclusions, proposals and recommendations of the Russian PPP Week 2018".

attracting foreign investments, understood both as financial resources and experienced project managers is of the equal significance. Moreover, one of the external drivers giving impulse to the PPP institution to evolve in Russia is exactly the pressure from foreign investors who are interested in using new business opportunities in transitional countries and who, in their turn, can bring a lot of advantages to the Russian market, such as easier financing arrangements, access to foreign capital markets and so much welcomed expertise (Mouraviev 2012).

The major role in attracting foreign investments in Russia is allocated to the Russian Direct Investment Fund that was created in June 2011 on the initiative of the President and Chairman of the Government of the Russian Federation. The goal of the Russian Direct Investment Fund (RFPI) was to attract foreign investment in the fast-growing sectors of the Russian economy. One of the characteristics distinguishing RDIF from other investment funds is the fact that it can only invest with foreign partners. During six years of the operation the Fund invested 1.2 trillion rubles (15,4 bln euro) in Russian companies, of which 100 billion rubles (1,3 bln euro) – are of RFPI and 1.1 trillion rubles (14,1 bln euro) - are the resources of the partners of the fund. Over 40% of its investments are injected into infrastructure, all types of infrastructure. RFPI is Russia's largest investor in the share capital of infrastructure projects implemented in recent years. Together with co-investors, it invested more than 270 billion rubles (3,5 bln euro), in more than 20 projects. Nine of them are realized on the basis of PPP or concessions. RDIF is a kind of investment filter, that selects the most promising projects and provides its expertise in terms of project analysis, reducing the cost of financing and increasing efficiency[39]. In fact, the airport Pulkovo is a good example of foreign investment in PPP in Russia, as well as the example of RDIF participation or, facilitation of the entrance of the foreign investor (for a brief description of the project see Annex 9).

Italy has always been seen by the Russian Federation as a solid and reliable partner in different areas of collaboration, not only tourism and agriculture, but manufacturing, infrastructure construction, scientific research and even space exploration. Thus in 2013 the Russian Direct Investment Fund and the Italian Strategic Fund (Fondo Strategico Italiano) signed a memorandum on the creation of a Russian-Italian investment platform whose focus will be the development of projects in Russia and Italy. According to the general director of RFPI Kirill Dmitriev in 2013 there were 500 companies with the participation of Italian capital, 70 of which had their own production in the country[40]. Despite a quite stable predominance of investors from Asia and Middle East on the Russian infrastructure market, the European companies with their "prevailing economic pragmatism" according to Dmitriev are showing always growing desire to develop joint projects in Russia too. For instance, such companies as Italian ANAS and Pizzarotti, French Veolia

[39] https://www.vedomosti.ru/economics/characters/2018/05/23/770510-fondi-gotovi
[40] https://rdif.ru/fullNews/797/

are already implementing a number of projects in the Russian Federation, while the project with the investor from Switzerland is at the negotiation phase. However, profit is believed to be the main motivation of business in general (which the any country's government should finally recognize as a legitimate one) while the prospect of increased profitability and improved shareholders' return the most important driving force in deciding whether to expand overseas or not (Gunhan and Arditi 2005; Nishtar 2004).

Russia has already realized a number of motorways and road infrastructure concession projects in collaboration with its Italian partners. Thus, in 2017 the Russian Direct Investment Fund (RDIF), state company Avtodor and the Italian infrastructure company ANAS signed an agreement to create a consortium that will develop the Russian road infrastructure and operate roads. As a pilot project to invest into, the parties chose the project of the complex development of the federal highway M-4 "Don", the main vertical axis of the Russian road system, connecting central and northern regions of the European part of the country with the North Caucasus, the Black Sea coast, the port of Novorossiysk. In addition to providing financing for the project and operating the highway, ANAS will act as a supplier of high-tech equipment for the organization of an integrated traffic management system on that road section[41].

With the emergence of PPP tool at the Russian market, its further legal evolution and consolidation in a number of economic and social infrastructure sectors, this new for Russian public and private parties collaboration method and infrastructure finance approach, proved to be another valid modality to facilitate foreign investor's participation in joint projects, as well as the means to attract foreign direct investment capital into the Russian Federation. Remaining loyal to the international tradition with the transport sector occupying the leading positions in the volume of investment in PPP projects worldwide, it was also the first to gain recognition as well as investment volume in joint projects in Russia, though not the only one. Recent years have been witnessing certain interest on behalf of the foreign partners with respect to various social infrastructure facilities, including hospitals, kindergartens[42] and sport complexes.

Thus, the managing director of investment department of "Avtodor-Invest" Averin A. A. during Russian PPP Week 2018, talking about various risk alleviating methods used by them in PPP road infrastructure projects, mentioned the so called corporate public-private partnership and drew the example of the Italian partner ANAS who took advantage of this tool developed within Russian PPP framework. This new mode of participating in PPP, that also serves as an interesting stimulus for the foreign investor, is used by Avtodor as risk alleviating instrument in order to

[41] https://rdif.ru/fullNews/2416/

[42] As far as CIS countries PPP investment projects partnered by foreign companies, Mouraviev mentioned in his work Turkish company participation in construction and operation of one of the airport terminals in Kazakhstan, as well as eleven kindergartens always in Kazakhstan built and operated by another Turkish investor (Mouraviev 2012).

reassure the foreign investor that his financial resources are in good, meaning safe, hands. It consists in the possibility for a foreign partner to enter the project not necessarily at the tender stage where the risks, in particular building and land risks are high, but at the operating stage where a lot of risks have been eliminated and where the predictable cash flows are present. The launching phase was organized and funded by the state company and only later on, the foreign partner, ANAS in this case, entered, bringing with it not only investment but also expertise, so needed at the project operational stage. This model has proved itself as a working one thanks to its flexibility and ability to adapt to the requirements of the investors, he underlined[43].

With 75% of investment into infrastructure coming from the national private investor in Russia, huge market volume this country presents and objectively valid Russian PPP legislation, a conclusion on huge untapped potential within Russian PPP framework for the foreign investor can be drawn. Fragmented knowledge and lack of empirical investigation on PPP in general, to say nothing about transnational PPP, together with TPPP novelty as a concept in particular, and necessity of major in-depth empirical research on TPPP various aspects, are the best witnesses of the knowledge gap present in the current literature as well as practical field of PPP implementation (Yu et al. 2018; Schäferhoff et al. 2009). The newly opened opportunities for the foreign investor in the taking shape Russian PPP market are vast, but being new it needs reference points, the road map, provided by the legal owner of this vast Russian ocean called PPP, for the investor to navigate safely and profitably, as well essential assistance of the scientific community in giving research based guidelines, the thing that this paper attempted to accomplish.

4. Case study

4.1 Description and Analysis

Considering highly confident information and sensitive subjects involved, there will be no names and all numerical information contained in PEF has been appropriately modified without compromising the significance and correctness of the results in the index calculations, neither harming the quality of conclusions drawn from it.

In June 2015 the Government of the Sunny City approved a resolution on concluding an agreement on the construction and operation of the medical and rehabilitation City Hospital based on public-private partnership provision. According to the resolution, which established the main

[43] Session: “Foreign players in Russia’s PPP market”, Russian PPP week 2018.

terms and conditions of the PPP agreement, as well as tender procedure and bid evaluation committee, the partner, determined by the results of the tender to be the winner, will conclude an agreement with the Sunny State Budgetary Health Care Institution for the design, finance, construction and operation of a new medical and rehabilitation center with highly effective functional characteristics. On September 18, the bid evaluation committee announced the results of the preliminary selection of applicants for holding an open tender for the right to conclude an agreement. Based on the results of the evaluation of documents submitted by investing companies, applications from two foreign companies, Italian and Turkish were recognized valid and meeting the general and special requirements of the pre-selection phase. Both candidates received the right to submit a bid. November, 23, 2015 was fixed as the day for the bids evaluation, an agreement on public-private partnership was to be signed before the end of the year. The partner, determined by the results of the competition, would conclude with the Sunny City (hereinafter the City) and the Sunny State Budgetary Health Care Institution (hereinafter the Hospital) the concession agreement for financing of the creation and maintenance of a new medical-rehabilitation facility. However, presumably because of political reasons (political conflict of November 2015) Turkish company gave up on the intent and did not take part in the Request for Proposal stage.

Officially if there are less than two proposals the tender is declared invalid, but if the bid evaluation committee considers the bidder proposal meeting necessary tender documentation requirements, the concession agreement can be concluded also with the only bidder. In fact, the situation of little competition is quite typical for Russian PPP market, constituting among other things, a competitive advantage for the foreign company, and the before mentioned case is a good demonstration of it. In case under study, the evaluation of bids, first, was performed basing on two types of criteria, technical and financial, each of them having the weight of 50%. Then, the degree of achievement of the project's objectives for each of the established tender criteria, expressed in the form of the coefficient, was to be determined. In the end, by multiplying the scores for both technical and financial criteria by the before mentioned coefficient, a final score of the bid was calculated and the Evaluation Committee was to make its final decision on the most appropriate partner.

When talking about designing and constructing of any infrastructure projects in general, one can't but have in mind an object of high importance not only for the country's economic development, but first and foremost of high social significance for the whole nation. The latter argument is of particular relevance for the social infrastructure objects, especially healthcare facilities. Their capital intensive nature, long-term service life period, indispensability of the cutting edge technologies and transversal impact on all the societal elements obliges the government to choose very attentively the appropriate contractor for their realization. In fact, the

grantor presented quite strict requirements of preliminary selection, the bidder was supposed to satisfy: the tracked experience (of a certain number of years) both in implementation of similar projects (of a certain dimension) and attracting debt financing (of a certain monetary amount) in the last five years, as well as to its ability to provide its own funds into the project in the form of share capital (of a certain monetary amount). It is worth mentioning, that one of the principal strengths for the international construction company, reported by Gunhan and Arditi in the result of surveying of executives in charge of large international contactors, was exactly track record in similar international projects, specialist expertise (together with sophisticated know how) and technological advantage (Gunhan and Arditi 2005). In fact, this competitive strength is in perfect line with what have been demonstrated in the case under observation.

Therefore, on December, 29, 2015 a specially created for this project self-standing company, the so called within the PPP framework, Special Purpose Vehicle, consisting of one of the top leading Russian banks and Italian company signed an agreement on public-private partnership with the administration of the City. An agreement under which it assumes obligations to finance the construction and operation of a new medical and rehabilitation center that will correspond to innovative achievements in the field of public health and will provide the residents of the district it belongs to with rehabilitation and engineering infrastructure with highly efficient functional characteristics corresponding to modern technologies of construction and operation.

The creation of a new hospital, according to the official estimations, will double the volume of medical rehabilitation services for the hospital, while the City will experience the increase in the volume of the before mentioned services by 18%. The hospital will service more than 8 thousand patients per year, providing among others, effective rehabilitation for patients with impaired function of central nervous system and motor support apparatus[44]. This investment project will also provide an additional incentive for the development of medical tourism in the City, which in the coming years is planned to be actively developed in the region.

This is the first healthcare project in this particular Russian city, which is implemented on the basis of public-private partnership. Besides being the first healthcare project in the Russian Federation, based on public-private partnership, it has been also recognized the best project of public-private partnership in the social sphere for 2016. This important and, at the moment the only award in the field of infrastructure development and public-private partnership, established by the association "PPP Development Center", was given within the framework of the business program of the Russian Investment Forum "Sochi-2017". It is also a healthcare PPP project implemented fully by private investors by means of SPV, for 29% owned by one of the top five

[44] https://rdif.ru/data/file/broshures-successful-investments/Catalog-rus-new.pdf

leading Russian banks and for 71% by one of the largest construction Italian companies. It is not the first, and certainly not the last, project realized in Russia by this general contractor, but it could be regarded the first one for them of such dimensions and definitely the first one in healthcare in the Russian Federation.

The lack of competition in Russia is observed not only when it comes to general contractors of PPP project, but also when it comes to banks, that can become valid partners and financial supporters of the capital intensive PPP operations. Though again, as in many other spheres much depends on how one looks at things – half glass full or half glass empty. Thus, the senior vice president for infrastructure of the Direct Russian Fund, Sedov I. L. talks about extreme scarcity of banks in Russia able to finance big and long-term (over 10 years) projects, while the Board Chairman of National PPP Center, Seleznev P. L. holds a brighter vision of various banks competing with each other, mentioning three of them, as well as growing competency level of both banks and investors, both of whom have their own expert teams[45]. Therefore, Russia certainly can not be yet compared to the Western Europe as far as the number of solid banks and their capital capacity, or the capital market development in general, but the trends of PPP mechanism development and improvement, as well as necessary for it tools are clearly perceivable.

Some important differences existing between various banks in Russia as far as their approaches to various PPP project are worthwhile mentioning here. What remains the same in all the banks and for all the projects, is certainly the requirements for the quality of the project and requirements to the borrower. Comparing two leading Russian banks, Gazprombank and Sberbank, for instance, the former is more accustomed to flexible relation with a customer by means of a tailor made solution, adapting in such a way to the project's peculiarities; while the latter, having an extensive branch network all over the Russian territory with a large number of employees, has managed to standardize its communication mode and provides to some extent "mass" services. Gazprombank, according to the executive Vice President of Gazprombank, Chichkanov A.B. is more attracted by huge projects and experienced contractors or construction companies who are interested to implement important projects in such fields as transport or healthcare infrastructure. Sberbank, on the contrary, is able to provide necessary support to the municipality or small investor who wants two construct the boiler room, for instance. In fact, Sberbank is famous in Russia for having created and launched at the market the so called "box solution", the proved to be successful standardized approach particularly in vogue in priority areas of the social sphere such as schools, kindergartens, homes for elderly, clinics, that are distinguished by a relatively low capital intensity and low profitability.

[45] Session: "Foreign players in Russia's PPP market" and Plenary Discussion "Spatial development 2024: Infrastructure defines economic growth", Russian PPP week 2018.

The object of the Agreement concluded between the City, Hospital and Partner (hereinafter the SPV made up from the foreign company and Russian Bank will be referred to as Partner) is the medical and rehabilitation hospital building to be constructed by the Partner on a land plot with a total area of 20,923 square meters, respecting the following characteristics:

a. total area of at least 30,000 square meters;

b. capacity not less than 480 beds (including at least 370 beds of the rehabilitation profile, which is the main one, and at least 110 beds of the surgical profile in the ophthalmology, urology, traumatology specializations), and at least 24 beds of reanimation and intensive care (504 in total);

c. including auxiliary departments created for the functioning of the beds of the main profile in accordance with the procedures for the provision of medical care, such as:

- Department of psychotherapy;
- Department of physiotherapy;
- An operating unit for at least 5 operating rooms;
- Endoscopic operating room with endoscopic cabinets;
- Department of transfusiology;
- The room of gravitational methods of treatment;
- Admission Department for planned and outpatient patients;
- Department of outpatient consulting and diagnostics (with accommodation of narrow specialists);
- Radioisotope laboratory;
- Department of radiation diagnostics and therapy;
- Hydropathic treatment unit with mud complex.

d. including the premises of the food unit, administrative and technological premises in accordance with the requirements of the legislation;

e. provided by infrastructure facilities (including outdoor networks) necessary for the operation of the Facility in accordance with its designated purpose;

f. provided with equipment including medical and non-medical equipment;

g. including other property necessary to ensure the operation of the Facility;

h. providing technological links of the medical and rehabilitation hospital building with existing buildings of the Hospital with:

i. the building of the Children's Traumatology and Orthopedic Rehabilitation;

ii. Surgical building;

iii. therapeutic building;

iv. other buildings of the hospital.

The term of the agreement is 10.5 years from the Financial Close Date: with (no more than) 3,5 years given for the construction of the facility and (not less than) 7 years for the facility operation from the date of its creation till the end of the term. The time period is in line with an average number of years typical of other PPP healthcare projects in Russia: 11 years for the projects within the PPP Federal Law, 15 years for those within PPP Regional Law and 21 years for the Concession projects (the source: National PPP Center database, proper elaboration). The 10-years and a half period was proposed by the public authority as one of the tender requirements and was accepted by the private party. This period, the operational phase duration in particular, during which the private operator is reimbursed, in fact, is determined by the public authority budgetary possibilities, i.e. ability to reimburse, as well as its priorities, i.e. whether it is currently involved in other capital intensive projects and, thus, willing to pay back debt immediately or "in instalments" spreading the whole amount cost over a longer time period. Thus, in Italy for example the average term for the reimbursement of the private party investments into the healthcare project facility is 15 years, while in Kuwait it is only 3 years. The dynamics of the PPP project may differ considerably depending not only on the final purpose of the collaboration and risk sharing mechanism, but also on the reward structure and degree of involvement of each partner in various stages of project implementation (Becker and Patterson 2005).

It has also been agreed by the parties, that the Operation Start Date can not be postponed for more than 6 months in case of modifications to the project regardless of the party whose initiative it was to introduce them. Therefore, the risk of the construction delay is addressed by the contractual commitments embedded in the agreement, as well as by the implicit knowledge, typical of any PPP project, that the Availability Payment will commence only when the Facility enters into operational phase. The very system of incentives characterizing PPP mechanism, the so-called bundling effect, i.e. the fact that the same subject is responsible for designing, construction and operation, makes all the costs being internalized as well as gives a strong motivation for the executing company to respect quality and time schedule standards to remain as much cost-efficient as possible.

Still in such conditions the deviations from agreed upon standards or even violations of the prescribed norms can happen, that is why the valid deduction system for such possible digressions should be put in place, especially when the Availability Payment method of private party remuneration is used. The case of our PPP hospital is not an exception: a deduction system based on the general degree of compliance with the Agreement requirements together with frequency the deviation or violation happens, a certain percentage (from 1 to 12%) is deducted from the Availability Payment if such deviation or violation occurs, again demonstrating contractual embeddedness as the means of addressing the risk of the facility potential underperformance.

One of the much praised advantages of the PPP infrastructure investment model is its incentive mechanism that ensures, besides the on-budget, the on-time delivery of the facility ready for operation. The fact that Availability Payment starts only after the commissioning of fully functional and operational facility is the strongest guarantee for the public authority that the project will be delivered on time. Nevertheless, no project is immune to setbacks of various nature, therefore, the agreement between the parties should provide for the appropriate measures for such kind of events. As in case of risk, that usually is defined as any event adversely affecting the outcome of the project, but that can actually be any event that changes the project's expected returns and cash flows, including in the positive way, the project agreement should provide for measures in case both when the project is delivered with delay or when it is delivered in advance, the later though happening on a rarer occasion.

My case, in fact, is more of an exception. Since the total number of years given for the facility construction and operation is fixed (10,5 years), (not more than) 3,5 of which are for construction and (not less than) 7 years for operation, the general contractor, who is also the main constructor of the facility took care of including into the agreement a corrective event protecting the private investor in case the construction will be achieved in less than 3,5 years. The corrective event is structured in the way that in case the general contractor finishes the construction in, let's say, 2,5 years, the Availability Payment will be recalculated, but still paid for another extra year, which, in fact, wasn't envisaged by the original agreement.

A few will argue that healthcare provision goes beyond a single standing hospital building. The same can be noticed about PPP project provision in healthcare: it is much more than just construction of a hospital building. The latest international trend in healthcare PPP projects, I already mentioned in the chapter II (PPP in Healthcare Worldwide), is the integration of various functions and of various levels of medical care, that might be provided by the private party (the Spanish Alzira model is the best successful example of such all levels integration). This trend though, is less typical for the Russian Federation, where its strong links with the Soviet legacy and paternalistic approach to the healthcare services provision are still commonly encountered and, what is of particular significance, PPP projects implementation, especially in healthcare sector is at its initial development phase. Therefore, within the Russian PPP framework, applied to the healthcare in particular, the PPP project usually involves building of a physical component of infrastructure, i.e. a hospital, rather than provision of other auxiliary non-core services.

It is also well-known that when implementing PPP projects, private partner receives income from the operation of facilities. In fact, in our case study, the Partner, besides having an obligation to design, construct and finance a new hospital building according to the grantor's requirements, should also provide maintenance of medical equipment, engineering and IT systems

during the Term of the Agreement. The partner's responsibility includes purchase of the medical equipment, following the market research, their installation, testing and commissioning, as well as training of the medical personnel who will use this equipment. Therefore, it is the Partner's responsibility in front of the City and the Hospital to properly install and commission all the necessary equipment sufficient for the implementation of the Project in accordance with this Agreement and included in the Equipment List in accordance with the design and working documentation.

Upon completion of installation and commissioning of the Equipment, after having conducted obligatory tests in accordance with the requirements of the current legislation, the Partner, the City and the Hospital shall sign the Certificate of Installation and Commissioning of the Equipment. Besides, the Contractor, performing the installation, and commissioning of medical equipment, must have an appropriate license to carry out this activity. In order to maintain and repair the Facility the Partner has the right to attract the Operator (as well as replace him), what both the City and the Hospital should be notified about within five business days from the date of the signing of such an Agreement.

In addition to fulfilling the responsibilities for the maintenance and repair of the Facility the Partner has the right, independently or with the involvement of third parties, to provide some services or to carry out certain commercial activities. Such commercial activities include:

- provision of supplementary food services (both for hospital patients and for hospital staff as well as visitors - cafe, restaurant, buffet, etc.);
- leasing premises of the Facility different from the part leased to the Hospital, provided that leasing of such premises does not hinder or complicate the Hospital the operation of the Facility;
- providing other types of non-medical activities that do not violate the requirements for the provision of medical care and do not conflict with the activities of the Hospital or with the basic healthcare principles.

Provision of the before mentioned services should be organized by the partner at its own expense or with the involvement of loan financing – the City will not provide any financing for the organization of such additional services or for compensation of expenses / losses of the Partner incurred in connection with them. The grantor requirements also prescribed equal distribution, in 50/50% proportion, of all revenue received by the Partner from third parties for the provision of such services. The rendering of extra services and performance of such commercial activities is not taken into account in the calculation of the Availability Payment, neither it affects its size and / or the payment mechanism. Even though the tender provisions allowed for the execution of

definite commercial activities by the Partner, the final Agreement concluded between the SPV, the City and the Hospital, didn't include any of them.

The reason for that can be multiple. First, the foreign company, one of the constituents of the SPV, as well as General Contractor of the project, is first of all a construction company, not an operating one, therefore it wasn't the company's focus from the very beginning. Secondly, as it was reported by one of the company's collaborators, the Partner has quite significant restrictions on the land plot, as well as limits in the construction budget, what doesn't allow him to think about additional areas only for provision of some commercial services, such as restaurants, cafes. Management of the parking lot is associated not only with the problem of the lack of exploitable land, but also with the numerous red tape related to the permission request process and the Russian Land Code in general. For example, in Italy there is a National Health Service rule, that prescribes to have 2,5 parking spaces for one patient – in Russia the public administration for some reasons seems not to be interested yet in such provisions or simply unable to provide necessary measures to ensure such or similar standards.

Therefore, despite the presence of the Partner's potential interest in providing some extra commercial services, their share in the total income according to the Partner's estimations will be insignificant – so, their main focus, at least for now, is the amount of Availability Payment, that also constitutes the heart of the economic-financial plan. The Concessionaire's main know-how, experience as well as interest is concentrated in the construction field rather than operation one. This means that management will probably be developed in partnership with another entity whose core business is that of hospital management or directly with the public partner.

This practical example might lead us to think about the immaturity of Russian PPP framework, in health project in particular, as far as the involvement of private party into non-medical service provision is concerned. Though in my view, considering a quite decent level of overall development of PPP institution in Russia, the fact that is recognized by many PPP practitioners as well as legal experts, what Russia lacks is the understanding (and sometimes trust in the private partner) of enormous advantages the public authority can obtain by granting private party the right to deliver services, in which the latter can be much more efficient. This paradigm will not only enhance the public sector performance in general, but will also eliminate inefficient operators and operations allowing the state to concentrate on its core competences, thus creating a "lean state" (Kyrer 2001). Moreover, the state should recognize and understand the private sector's legitimate and always existing profit driven motives (Nishtar 2004). On the other hand, this shift in economic and cultural mentality can not happen overnight: the recognition by the upper administration of the lack of solid, professional operating companies on the Russian market is already a sign of awareness of the problem, what, in other terms, means a step forward towards its practical

resolution. The latter can be also perceived by the foreign investors as an opportunity to occupy, if not an empty niche, but definitely a promising growing market.

Coming to the purely financial component of the deal, it should be said that the total investment in the project, amounts to 6.9 billion rubles (≈100mln euro), from which investments in construction amount to 2.3 billion rubles (≈30 million euros), 48 million euros in medical equipment, and other 24 million euros will be required for special engineering equipment of the building. In fact, it is one of the most costly PPP healthcare projects in Russia (though not the most expensive one), considering that the average cost of the PPP project under PPP Federal Law is 2.505.277.143 (≈32mln euro), under PPP Regional Law is 1.002.737.500 (13mln euro) and under the Concession Law 855.312.184 (11 mln euro) (National PPP Center, proper elaboration)[46]. The equity debt ratio of the hospital facility is the classical for the projects realized through project finance mechanism worldwide, i.e. 20% equity and 80% debt, what also respected the tender requirements related to the debt financing part that should not exceed 85% of the total investment for the creation of the Facility. As it has been already mentioned above, the Special Purpose Vehicle (SPV), an independently standing, newly created company for the strict purpose of the project implementation and its management, for 71% owned by the Italian construction company and for 29% by the Russian Bank.

The peculiarity of this project, as far as its financing is concerned, is that at a definite moment of the project life, more probably just before the Financial Closing takes place, the Russian Direct Investment Fund, the Sovereign Fund of the Russian Federation, should enter the project by conferring a certain percentage of equity (presumably from 20% to 49%), the exact amount of which will be decided by all the parties, basing on the Fund's interests, its risk tolerance and other already existing arrangement between the partners. In fact, as reported by KPMG study, one of the measures that can contribute to the successful financial closing of PPP projects in Russia and therefore to the overall project successfulness is the state participation in project financing and provision of additional guarantees of state support, while the projects of more than 1 billion US dollars directly required additional efforts from the state (Shabashevich 2011).

It is Partner's responsibility to provide for all the costs and expenses arising in connection with the performance of its obligations, both under the Agreement and other Project Contracts, including the costs and expenses during the Construction and the Operational Stage. The City and the Hospital will not pay or reimburse any expenses, as well as any revenues not received by the Partner, with the exception of payment obligations that expressly provided for in the Agreement. Usually, when implementing PPP projects, the private partner receives income from the operation

[46] http://www.pppi.ru/projects?page=2&sphere=726&form=5&title=727

of facilities. The situation in the healthcare PPP projects is slightly different in that the private party in most cases (with the exception of the most recent, new, integrated forms of PPP, being nowadays applied in a very few countries) is unable, due to legislation norms and absence of expertise in this field, to provide medical services. The most common and widespread method of reimbursement of the private party investments and guaranteeing him profitability in such projects is the Availability Payment, which in my case can be defined as the payment made by the City and the Hospital in favor of Partner based on the Partner's meeting service quality standards established by the Agreement for the relevant period of time.

Generally, in Russia there can be distinguished three types of payment mechanisms (i.e. the way the investments are reimbursed to the private party), used in PPP: availability payment, mixed investment return model and direct collection of fees from consumers and / or other commercial activities. The availability payment, i.e. a regular fee paid by the government to the concessionaire based on the project performance and not on the usage of the facility is the most commonly used approach in the healthcare PPP projects. In such a way, the private party is ensured to get a regular and stable, previously agreed upon payment, thus protecting itself from the demand risk, while the public party keeps the project monitored and under control, and even though having to bear the financial risks, maintains safe its social responsibility. Hence, this mechanism is believed to benefit all parties involved (Chan et al. 2008).

The payment mechanism under the Agreement can be expressed by means of the following formulas:

PP = AP + CR, where:

AP = IP + OP – D, where:

IP = PDCP + PDCI + PECP + PECI or

(IP = PID + PII), PID – principal amount + % of the debt; PII – principal amount+% to the Investor

OP = SCE + SLI + PHL;

where:

PP – Payments to the Partner.

AP – Availability payment.

IP – Investment payment is a subsidy of the City to cover the Partner's expenses on interests and principal amount of debt financing and the Partner's expenses on interests to the Share Investors and principal amount of the debt under the Subordinated Financing Agreements (equity loan).

PDCP – payment for reimbursement of Partner's expenses for payment of principal amount of debt under debt financing.

PDCI – payment for the compensation of the Partner's expenses for the payment of interest on debt financing.

PECP - payment for reimbursement of the Partner's expenses for payment in favor of the Investors of the principal amount of the Equity Financing debt provided in the form of subordinated loans.

PECI - payment for compensation of the Partner's expenses for payment in favor of the Investors of interests of the Equity financing provided in the form of subordinated loans.

OP – operational payment is the payments of the City and the Hospital to the Partner to cover the Partner's Expenses and to reimburse the Partner's lost income.

SCE – is a subsidy to compensate the Partner's expenses, it is a balancing value, i.e. is calculated as the amount of the Operating Payment for the period minus the SLI and PHL.

PHL - Payments of the Hospital under the Lease Agreement of the Part of the Facility Agreement.

SLI – is a subsidy for lost income, is provided in the last two years of the Term of the Agreement to ensure the payment of dividends by the Partner.

D – The amount of deduction for the previous period.

CR - Commercial revenue from non-core activities.

Availability Payment usually begins to be paid after the Facility enters into operation, so it does in my particular case study. It consists of Operational and Investment payments. The Availability Payment is structured in the form of three subsidies and PHL. The first subsidy is the so called Investment Payment provided by the City to cover partner's expenses on interests and principal amount of debt financing as well as interests and principal amount of the equity financing to the share investors (provided by them in the form of subordinated loans). The second and the third subsidies, together make the so called Operational Payment, provided by the City and the Hospital to cover Partner's expenses and to reimburse the Partner's lost income. Moreover, a third subsidy, the so called Subsidy for lost income is provided in the last two years of the term of the agreement to ensure the payment of dividends of the Partner. Each of the subsidies can be partially reduced by the amount of deduction for the previous period. In fact, one of the requirements of the tender documentation was for the Availability Payment not to exceed a certain maximum value. The City and the Hospital are entitled to use any sources of funding allowed by the Legislation to pay the Partner. All payments under this Agreement are made in Russian rubles.

One of the critical issues facing any PPP project is the possibility of dispute emergence and, what matters most, the painful procedure of their resolution. Speaking about litigations and court procedures, one should already bear in mind some peculiarities of the general legal system in Russia, underlined also during the Russian PPP week 2018 by one of the partners of international legal companies, by stating that "the execution of the court decision in Russia against the public

party is very difficult (meaning unlikely)"[47]. This can become one of the risk factors for any private partner, including the domestic one, to say nothing a foreign partner, who in general is found in unfamiliar for him cultural environment, let alone peculiarities of the hosting country legal context. At the same time, this problem pertains more the country's general legal environment, the execution of public courts decisions to be more exact, rather than a PPP specific one.

The problem that might considerably affect the decision of the private foreign company to enter the PPP project in Russia, if not scare it away. In fact, if for the Concession Law and most regional laws on PPP there were indications in the respective laws on whether resolution of disputes in international commercial arbitration was possible or not, as well as the reference to the possibility of application of foreign law, in the new Law on PPP this issue is not regulated, meaning that it is up to the contracting partners to establish satisfying them conditions (Maslova 2015). A similar observation was made by one of the legal experts during Russian PPP Week 2018 who pointed to a very vague indications in the Russian law on PPP on whether the private partner in case of dispute can apply to the private court or to any other international court (the court of London for instance)[48].

The dispute settlement procedure in my case study, provides the following regulations. In the event of a dispute, the Parties should first of all exert all possible efforts to resolve it by negotiation between each other. In the event of failure to reach agreement during the negotiations any Party may notify the other Parties of its desire to submit for consideration to the Expert Body any dispute of technical nature or other disputes, but in the latter case only on condition that the consent to its submission to the Expert Body was received from all Parties. Only in case the Parties are unable to resolve the dispute with the Expert Body assistance within 45 (forty five) business days from the date they received a notification about it (or at a later date as agreed between the Parties), regardless of the reason for such incapacity, such dispute shall be resolved in the International Commercial Arbitration Court at the Chamber of Commerce and Industry of the Russian Federation in accordance with its rules in effect at the time of presenting the statement of claim. The place of arbitration is Moscow, Russian Federation. The Arbitration decision is final and binding on the Parties, and the Parties agree that it can be enforced by any competent court. The language of the court proceedings, documentation and court decision is Russian. A party that provides documents in a foreign language must provide for their translation into Russian at its own expense.

[47] Revzina O.V., partner of the international legal company Herbert Smith Freehills, Session: "Foreign players in Russia's PPP market" and Plenary Discussion "Spatial development 2024: Infrastructure defines economic growth", Russian PPP week 2018.
[48] Ivanova I., legal expert of the international legal company Herbert Smith Freehills, idem.

It goes without saying that in projects of this kind, host government plays an important role in selecting an appropriate private partner, in choosing the suitable economic sector where to invite him, by accepting the responsibility for creating an attractive investment climate in it as well as properly preparing projects to stimulate interest from private companies (Wibowo and Alfen 2015). The government's role doesn't finish here, though. It should not only keep its vigilant eye on the project performance indicators, but also implement effective monitoring tools and analyzing system to ensure an ongoing monitoring process and observance of technological process. This process should be based on regular progress monitoring reports prepared by the concessionaire (EPOS Health Management 2013), on the one hand and the presence of competent experts for project implementation monitoring on the public side, in order to guarantee an independent monitoring process, on the other hand.

Thus, during the term of the Agreement the City and the Hospital (and the persons authorized by them) may organize inspections of the Partner's compliance with the terms of the Agreement, namely:

(a) inspect the Facility as well as any objects related to the Facility subject to compliance with safety standards;

(b) review the Project and Operating Documents in connection with the performance by the Partner of his obligations;

At the same time, the City and the Hospital are not entitled to interfere in the economic activities of the Partner. The cost of these controls shall be borne by the Hospital or the City (depending on whose initiative the inspection is carried out). The partner is obliged to eliminate all violations revealed as a result of the verification, in the shortest possible time and notify the City or the Hospital about it. The Partner, in its turn, undertakes to provide the City and the Hospital with the Reports confirming the fulfillment by the Partner of the obligations under the Agreement. There is no specific form this Report should have, the only requirements concern the language (the Russian), and the means of information transmission (paper document).

The Agreement is the main Project Contract establishing the rights and obligations of the Parties and the main functions of the parties to this Agreement and to other Project Contracts.

The Contracts for the Project include:

(a) the Agreement;

(b) The lease contract of the Land Plot for Construction;

(c) Long-term lease contract of the Land Plot;

(d) The lease agreement of the Part of the Facility;

(e) Basic financing agreement;

(f) Direct agreement with Debt Investors;

(g) Contract (s) with an organization licensed to carry out maintenance of medical devices (equipment, apparatus, instruments, devices);

(h) Insurance contracts;

(i) Agreement with the Operator;

(j) Contract with the General Contractor;

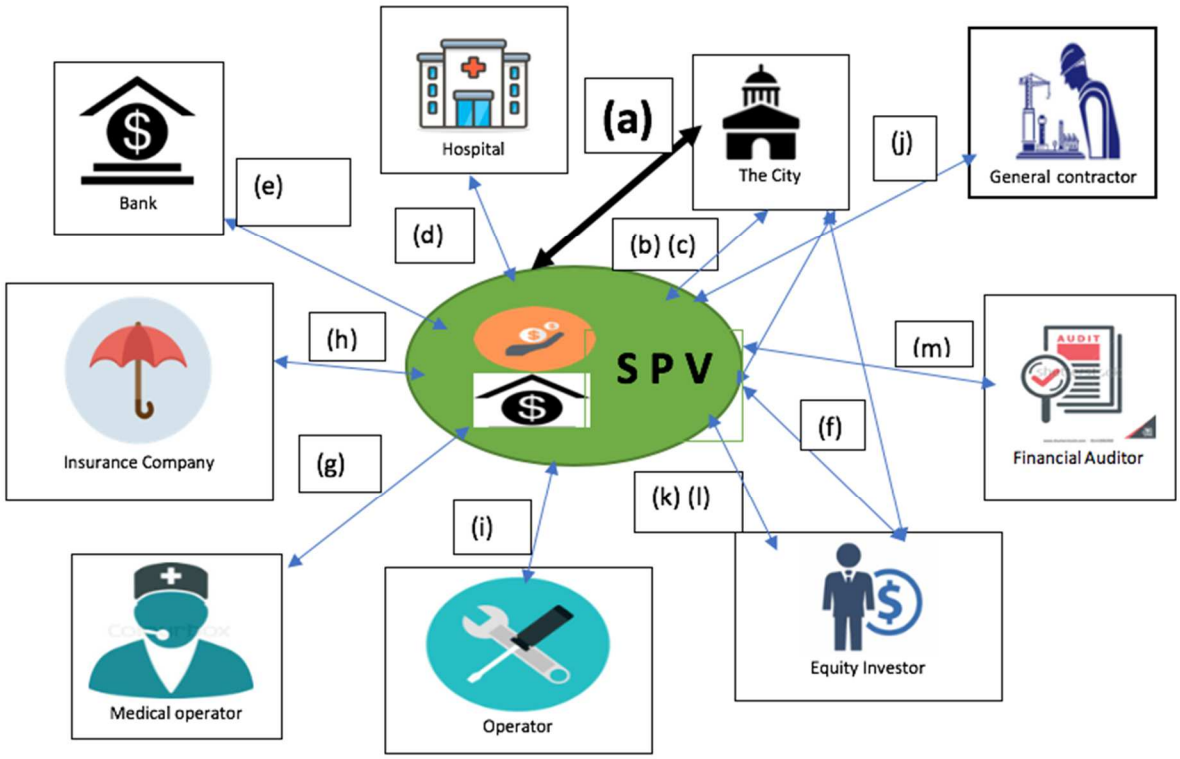
(k) Subordinated Financing Agreement;

(l) Mortgage agreement in favor of Debt investors;

(m) Agreement with the Auditor of the Financial Model.

Just to show the complexity of PPP undertaking from the contractual point of view that is determined by a large number of subjects participating in the initiative and the fact that all of them, despite having one common objective, have different intrinsic interests and ways of achieving this objective, the corresponding scheme has been constructed depicting two-way communication mechanism and intricate relationship network:

Chart № 7: The Contractual relationships in PPP Health Project



Source: Contractual and tender documentation of the Project. Proper elaboration.

Finally, coming to what, to some extent, can be defined as the heart of the PPP arrangement, the condition that ensures the often mentioned, cited and recently becoming more and more controversial VfM, the clause that makes the public entity to opt for this form of infrastructure provision rather than the conventional public procurement, one certainly has in mind risk sharing mechanism. Subchapter 4 of chapter II of this work was entirely dedicated to risk, different approaches to its definition and classification, its central role for the project management in general, as well as various considerations relevant for the PPP undertaking, in particular. The risk matrix, an often used risk sharing instrument, at least as the visual assistant for the risk negotiation, by the PPP practitioners nowadays, has not found its application within the healthcare PPP project under study.

The procedure for allocating risks and benefits chosen and agreed upon by the parties and applied in this project can be defined as a conception of Corrective Event. It consists in twenty-one possible events, the occurrence of which will have an impact on the project's cash flow and, therefore, the investors profitability and, accordingly, twenty-one effects following each of these events. To be more precise, upon occurrence of each Corrective Event on the basis of the Partner's Financial Model, the effect of the event on the Project cash flows is determined (Corrective Event effect). Two types of effect are distinguished: positive and negative. The effect is recognized as positive if, as a result of the onset of the Corrective Event, the net present value of cash flows for the equity investors increases. The effect is recognized as negative if, the net present value of cash flows for the equity investors is reduced.

The distinction is also made between Corrective events basing on whether their effect is considered during the period from the base date[49] till the date of the financial closing or during the period from the Facility creation till the end of the Term of the Agreement. The distribution of the effect of a Corrective Event is made by changing the level of the Availability Payment on the basis of Financial Model. The financial model is, therefore, subject to review upon request of either Party in order to ensure that the formulas, assumptions and other provisions contained are consistent with changes in circumstances related to the Project and its further approval by the other party, as well as its verification by the financial model auditor. There are some Corrective Events that don't require the City's approval, or better to say, the City is not entitled to refuse approval and / or offer any amendments and / or additions in accordance, the exclusion will make only the mathematical error in the calculations. These three "unique" Corrective Events regard the change in the fixed base interest rate required by debt investors for the use of the provided financing, the

[49] The base date is the calendar date of the working day, determined 30 (thirty) business days before the end of the deadline for submission of bids.

change in the exchange rate of the euro against Russian ruble and some decisions taken by the Russian tax authority.

As already noted, an essential component in the Public Private operations is related to the identification of risks that may cause discrepancies between the initial forecasts and the final result, so as to be the subject of a negotiation between the parties with the ultimate goal of transferring a significant part of risks from the public client to the private operator (or concessionaire), generally represented by the SPV. Besides, this practice is always aimed at maximizing the already mentioned VfM. The process is further complicated by the foreign company inclusion into a PPP project. Thus, the most significant critical risk factors (CRF) in transnational public private partnership (TPPP) projects identified by Yu et al. in the result of the systematic review on TPPP, are legal risk, cooperation risk between public and private sector, tariff risk, financial risk, and political risk (Yu et al. 2018).

Financial and political risks, closely related to the so called country risk, are of particular interest for my work. Political stability of a country, for example, is believed to be the basis for evaluating the risk level of an international construction operation. Risk factors, in general, are already of great relevance for all PPP projects, and they are even to a major extent critical for TPPP, where the risk factor sharing picture is complicated by foreign penetration, implying a greater number of unfamiliar and often uncertain issues for the investor within the host country environment, such as new local codes, business practices, supply chain and even geography (Gunhan and Arditi 2005; Rebeiz 2012). TPPP, being a large-scale infrastructure project, requiring huge investments, encounter further challenges once entered the foreign country with its own financial market peculiarities and typical of that nation macroeconomic environment. There are much more, new and often complex variables not encountered in the domestic market, but present overseas. In emerging markets, for instance, the concessionaire is faced not only with general country and specific project risks, but also those related to corruption practices and potential shortages of human talent (Yu et al. 2018).

Among all possible long list of various risks, the SPV can face, I find it reasonable to distinguish the following ones pertaining the case under study:

- Environmental risks – risks arising due to adverse environmental situation that can lead to an increase in costs and time for the realization of the initiative, as well as impact negatively the environment of the project surrounding territory;
- Design and construction risks – risks related to design errors, problems in technical and engineering solutions adopted, incorrect construction technique, project delays and building cost overruns;

- Financial risks - risks related to the event (interest rate change, exchange rate change) or action (lender being unable to meet its commitments) that can impact the financial performance of an entity and lead to increase in financing costs;
- Operational risks – risks related to higher operating costs, in particular to ordinary and extraordinary maintenance, as well as low efficiency of the plants and changes of the agreed standards of the service provision, tariff changes and other variations of other factors impacting the overall operational costs.
- Governance risks - risks related to the emergence of conflicts and misunderstandings concerning order of dividend distribution or privilege granting between equity and debt investors, or senior debt creditors and subordinated debt holders, the situation that can put the financial viability of the project in danger.
- Market/commercial risks – risks related to the reduction in demand of commercial services and price volatility: the supply side risk and the demand side risk are usually distinguished;
- Legal risk - risks related to occurrence of changes in legislation, modification of regulatory requirements and changes in government policies with respect to laws and regulations, in general;
- Force majeure risks – risk related to natural disasters, prolonged strikes, and other events uncontrollable or unforeseeable by the parties;
- Political/Country/Sovereign risks – risks related to the emergence of events, that are, at least to some extent, under the control of the government of the borrowing country, including expropriation of the project, withholding or delaying licenses, denial in providing appropriate forum for resolving disputes, enacting laws that may adversely affect the project operations (Nagy 1979; Merna and Njiry 2002);
- Administrative risks – risks related to the problems that can arise during the obtainment of authorizations for various works and processes.
- Risk of project failure – arising due to the combination of previous risks that could compromise the implementation of the project itself.

The distribution of risks between the public and the private entity in financial terms is translated into determining the way and the amount of the payment/fee for the remuneration of the services provided by the concessionaire. In the majority of contexts of PPP project implementation, the risk matrix represents a useful reference tool to manage the process of negotiation of the Agreement, which, in turn, is the main reference document that establishes the transfer of significant risks of the public entity to the private sector, as part of project financing operation. Basing on the detailed study of the project Agreement and other project related documentation, a risk matrix has been composed in order to have visual tool assisting in the complex “risk digestion process” (see Annex 10).

Some of the risks have well-known and commonly used mitigation instruments: the inflation is usually addressed by means of indexation, the effects of the change in exchange rate is often shared in variable percentages between two parties depending on the time period it happens and the amount of the percentage points of currency change, or by means of appropriate financial tools such as call options or forward contracts. Instead, some risks present a serious subject for worries for the private party, operating at the foreign market, first, because they can seriously compromise the project's viability and, thus, the private investor's profits, secondly, there are really few, and often very costly, mitigation tools. Among the most "dangerous" risks, especially in the context of developing, or middle-and low-income counties, the political or the country risks are usually mentioned. The risk of unwarranted expropriation of the project or nationalization of a newly constructed facility is particularly high in the countries with authoritative political regimes and high levels of corruption.

This risk acquires even more critical nature within transnational public private partnership models, where private investor is doing business in politically sensitive sectors with powerful governments and where the need in sound and legal political support to ensure fairness, transparency and long-term sustainability is even more evident (Wibowo and Alfen 2015). The country risk factor is significant especially in case of a foreign private partner, who is unfamiliar with the "geography, the local codes, the business practices, and other idiosyncratic cultural and operational issues" (Rebeiz 2012).

No doubts, there are objective dissimilarities between the Russian and Western European modes of "doing things", that obviously find their reflection in political courses and economic policies, but there is also clear understanding of, at least, economic interests of one party in the other's and recognition of undeniable common goals, unachievable alone. While in politics or human rights, shared values between Russia, on the one hand, and industrialized nations, on the other hand, are just emerging, in other fields, such as economy, formation of shared values is quite possible, and Russia is eager to seize each available opportunity including PPP development (Mouraviev 2012). On the other hand, it is becoming always more aware of huge untapped resources outside of Russia.

Probably the only mechanism for mitigation of the country risk, is the recourse to the services of the Export Credit Agency, the agencies that promote export by providing insurance against the country risk for the export credit obtained from banks and other financial institutions, the so-called "national interest lenders" (Merna and Njiry 2002). In Italy this function is performed by SACE. The private company in my case has chosen to participate in the project without assistance of SACE. The reason for this decision finds a couple of explanations: first, very high costs of providing such a guarantee on behalf of this Export Credit Agency, which retains Russia

a high risk country (Country Risk Map, 2016). Secondly, as it has been reported by one of the company's collaborators, having as your major partner a solid bank with good reputation and public participation, the Russian Sovereign Fund as one of potential co-investors and the clearly expressed interest of the public authority in the project, due to its high social significance (healthcare infrastructure), gives your major level of security, even though a purely mathematical guarantee against political risk is absent in this particular case.

The access to the appropriate financial engineering tools and relevant bank backing is even of major significance in the international projects and, therefore, the ability to ensure adequate financial support might be one of the most important award criteria for some projects (Gunhan and Arditi 2005). Though the relationships between the company, usually SPV, and financial institution is a two-way road, as any relationship in general, therefore, the attractiveness of the project, which can be linked to the expected benefits, also influences the accessibility and availability of financing, as it has been demonstrated above (Chou and Pramudawardhani 2015).

The importance of the project to the local economy and prevailing political regime not does only determine the extent of political risk, but the governmental interference as well, what again can be clearly observed in my case (Rebeiz 2012). Thus, private party in my case study, despite having assessed political risk as significant, but being in conditions of absence of the tools to minimize it in the framework of PPP, decided to rely on a number of objective, though not contractually or financially reinforced factors, and made the decision to participate in the project. Generally speaking, considering the government ability to take on political responsibility and based on fair risk allocation principle, it will only benefit from retaining most of the political risks especially within transnational PPP framework (Lobina 2005).

Another risk, quite unwillingly taken by the private party, independently from the investment repayment mechanism adopted under agreement, is the risk of modification of the tariff, the decision usually taken by the state authority. The most effective tool addressing this risk would be inclusion into the contract of the adjustment formula together with the renegotiation mechanism (Wang and Tiong 2000), implying that in case of the before mentioned event, the parties can renegotiate and make changes into the payment amount to ensure the equitable sharing mechanism for this risk. Moreover, public users are well known to be sensitive to tariff levels, thus, it is not only the private party who worries about his profits, but the public actor should be also cautious in dealing with this problem.

The tariff risk is even more critical issue for transnational PPP, considering the tariff relation to the economic benefits of the foreign investor, the fact recognized and demonstrated by Yu et al. in their study on critical risk factors for TPPP (Cocq and McDonald 2010; Yu et al. 2018). In TPPP projects, it is the government who has the authority to control tariff as well to protect

users frim unbearably high tariffs (Wang and Tiong 2000; Wang et al. 1998), therefore the tariff should be clearly spelled out in the contract, as well as the tariff adjustment mechanism. Moreover, in Russian Federation, the government is extremely sensitive to the tariff structure issues, in support of what a very firm "advice" of the Director of the Department of Infrastructure Development and PPP of the Ministry of Health of the Russian Federation, Kazutsin A.V. to the private companies willing to become public entity partners in the PPP initiative, "not to involve the tariff structure and to avoid attempts to change it in order to include various investment elements in it, but rather try to bear in mind such tools of compensation of investment and, if necessary, operation costs, as minimal guaranteed profit or co-financing mechanism"[50].

The tariff risk is particularly relevant for the operation phase of project's life. This risk, in case of my project under study, actually doesn't exist for the private party, thanks to the payment mechanism provided for by the contract. That is, the concessionaire has to pay for the operational costs, that obviously include tariffs on various utility services, but which later (the operational costs) are reimbursed by the City.

It is very important to note that one of the main risks of this PPP transaction, which is borne by the private operator, concerns precisely this phase (Investment phase) and it is the exchange rate risk, a more detailed consideration of which is presented further, in Case Study in Numbers part.

As far as legal risk, i.e. changes in laws, is concerned, this risk event is provided for in the Agreement. The effective laws at the Agreement signing date are valid, and in case there are subsequent laws requiring modifications, meaning adapting to some new law before the authorization to the project commission is received, the effect of this law on the project must be evaluated and recalculated. The Agreement also clearly states the obligations and responsibilities of the Partner and the City in receiving, maintaining updated and in force all necessary permits and authorizations, as well as the parties who bear costs related to their receipt, renewal and maintenance in force (Administrative risk). Thus, it is the commitments embedded in the Agreement that respond to the administrative risk in my case study.

It is worth mentioning here one peculiarity of the Russian institutional framework that finds its reflection in public private collaboration practices, in particular within PPP project implementation method and, which was also underlined by one of the private company's collaborators, that is categorical respect of all the bureaucratic and administrative procedures before the project can take off. Other two comments, one made by Director of the Department of Infrastructure Development and PPP of the Ministry of Health of the Russian Federation, Kazutsin

[50] Session "Social Structure Development: From needs assessment toward new quality of life", The Russian PPP Week 2018.

A.V. the other by the Minister of Healthcare of Sverdlovsk region, during the Russian PPP Week 2018 regarding the foreign private partner in PPP healthcare projects in Russia, addressed exactly the necessity for the foreign company to respect and categorically abide by all the bureaucratic procedures of the Russian institutional framework, as well as validity or applicability of the same rules for Russian and foreign partners, meaning no "indulgences" or "discounts" for a "foreigner", were highlighted[51].

In fact, the financial closing of the case under study hasn't been yet achieved because of this particular reason, i.e. incomparability of Russian and European project design standards or, better to say, presence of relevant differences between two countries' requirements to the project documentation. There is a number of requirements in the Russian standards that simply are not provided for in the European norms, in the result of what the project solution developed by the foreign partner has to be adapted to the operating project standards of the Russian Federation, what obviously took extra efforts and time. To achieve financial closure, it is necessary to comply with a number of terms and conditions of both technical nature, as well as financial requirements.

One of these conditions is the development of project documentation and its approval by the state expertise commission, only after which the financial closure can be reached. As it has been reported by the private partner's financial collaborator it wasn't an easy process, but which the concessionaire rigorously respected and put all the efforts to adapt to. As one of the "soft", intangible factors, or the peculiarities of the host culture environment, affecting the project implementation, also underlined by the private company's collaborator, is the difficulty to explain to the Italian technical engineers the reason why the things are done in that way and not in another, especially when there wasn't a specific reason, but just because it has always been done like that. Despite these difficulties, effectively managed by both partners, and some other minor disagreements, that make natural part of the PPP negotiation process, the financial closure has been postponed for only a year and a half with respect to the original date of the financial close.

The previously mentioned VfM indicator, that is basically the cost of PPP and the quality of service, was not calculated by the private party. The Agreement was concluded in December 2015, and the tender for the project implementation was executed on the basis of regional PPP law, that didn't require its calculation. From the first of January 2016 though, after the new Federal Law on PPP came into force, the calculation of this indicator became obligatory. In Russian PPP practice usually this index is calculated by the private party, because of the widespread character of the private concession initiative mechanism in Russia, that is, when a private company prepares its proposals independently and sends it to a particular state authority. It becomes the responsibility

[51] Social Structure Development: From needs assessment toward new quality of life, The Russian PPP Week 2018.

of the state, when it is the state who initiates the project and usually these are large and significant projects, such as road construction, airports, health facilities. Just the way one part of the academic community views VfM as a deceptive technique that together with risk transfer manipulations and investors' miscalculations are aimed at rendering PPP more appetizing for the public operator (KS et al, 2016), in the same way there are many PPP practitioners who view VfM as a fiction.

All Project documentation, as well as all Working and financial documentation related to the implementation of this Project, should be prepared and submitted to the City, Hospital and State authorities in Russian language. All notices and statements in accordance with this Agreement shall be also made in Russian language and in writing. In fact, the thing that should be improved in the framework of Russian PPP and what would definitely facilitate foreign investors' participation in PPP projects in Russia, as well as the pace of PPP market development in general, is the availability of all necessary project documentation also in English. Such recommendation was also given by Vartevanan, R., manager of PPP and infrastructure projects of KPMG in Russia and CIS countries[52].

One of the important roles in transnational public private partnerships is reserved also to the legal agencies or international consulting agencies and outsourcing market in general, the services of which a foreign company may need to enter a new to it market. Despite their influential role at the PPP market, there is perceived lack of studies of PPP and their effects from the private partner point of view (Hodge and Greve 2018). Moreover, judging by the participation of leading international consultancy agencies, such as E&Y, KPMG or PwC, who apparently don't have much experience in PPP healthcare project implementation in Russia, one can make a conclusion about not so active involvement of the foreign investor in PPP Russian healthcare market. There is only one project (development of a medical center) E&Y reports to have provided its legal and financial advisory services to (Ernst and Young 2013).

Storozheva explains such a low level of interest and, therefore, participation on behalf of the biggest international consulting agencies by low level of development of healthcare infrastructure field in Russia and, therefore, not so high investment levels (Storozheva 2016). In fact, it is difficult to argue that PPP healthcare projects with the foreign investor participation are numerous, but judging by the growing total number of PPP health projects in Russia, the presence of even few of them, considering the capital intensity and overall project's dimensions, is a positive sign of an upward tendency in the PPP market development in Russia. Another possible reason for their seemingly not so active participation, can be also the high price of their services. Thus, the private company in my case study has chosen a less known, but still well-established and holding

[52] Session on "Conclusions, proposals and recommendations of the Russian PPP Week 2018".

a good reputation legal consulting company. As far as financial consulting and financial advising services these are usually provided by large well-known banks from the host country, what was also confirmed in my case.

4.2 Case Study in Numbers

The construction period lasts 3.5 years, during which most of the expenses for the construction of the structure are incurred, CAPEX + some OPEX (see Table №6).

Table № 6 CAPEX and OPEX of the project (in mln. rubles)

CAPEX, including:	9.029,4
Medical equipment	3.575,9
Engineering equipment	1.809,5
Object construction costs, exc. medical and engineering equipment, building lease during construction period	3.641,6
Building lease	2,4

Considering that a large part, we can say the major one, that of medical equipment will be purchased from the European or American companies only after the construction of the structure is completed and, therefore, long after the financial close, in which the euro / ruble exchange rate has been set, the risk that presents major problem for the foreign private company within this project, is definitely the exchange rate risk. The origin of this risk is found in the fact that major part of equipment or plants is purchased in the USA or Europe, so they are paid in foreign currency (for Russia) and after the financial model is closed, all the amounts, since they are managed by local municipal companies with entities under Russian law, can be paid only in Russian rubles. This risk emerges after the financial closing, because till this date the Agreement provides that any variation of Russian ruble against euro is taken into account in the economic financial model. Therefore, before the financial closing date the foreign currency risk is shared by both partners, after that date it is entirely on the private company.

Since the medical equipment can not be purchased immediately, because you should build the hospital structure first where to put equipment and from the moment of the financial closing till the actual date of the cash outflow for their purchase, at least two years can pass, therefore, the risk is very high. Considering that there are periods in Russia when in just 4-5 days the Russian ruble can lose15-20% compared to the euro, the concessionaire must be very careful in dealing with this risk, that in fact has been confirmed by the private company manager to be the most dangerous risk, the private party is very sensitive to. Here again, SACE can help to immunize this risk, but the "risk immunization" services of this institution are very costly. There is another possibility of mitigating this risk: to make a contract for the purchase of equipment and to make a substantial advance payment in supplier's favor in order to, a kind of, "bind" a purchase or to commit yourself to a purchase. The latter modality would require access to the financing resources ahead of time provided by the agreement and, thus, to pay interests, that are very high in Russia. Therefore, the company will have to weigh all pro and contro, to make all necessary calculations in order to make the right reasonable decision.

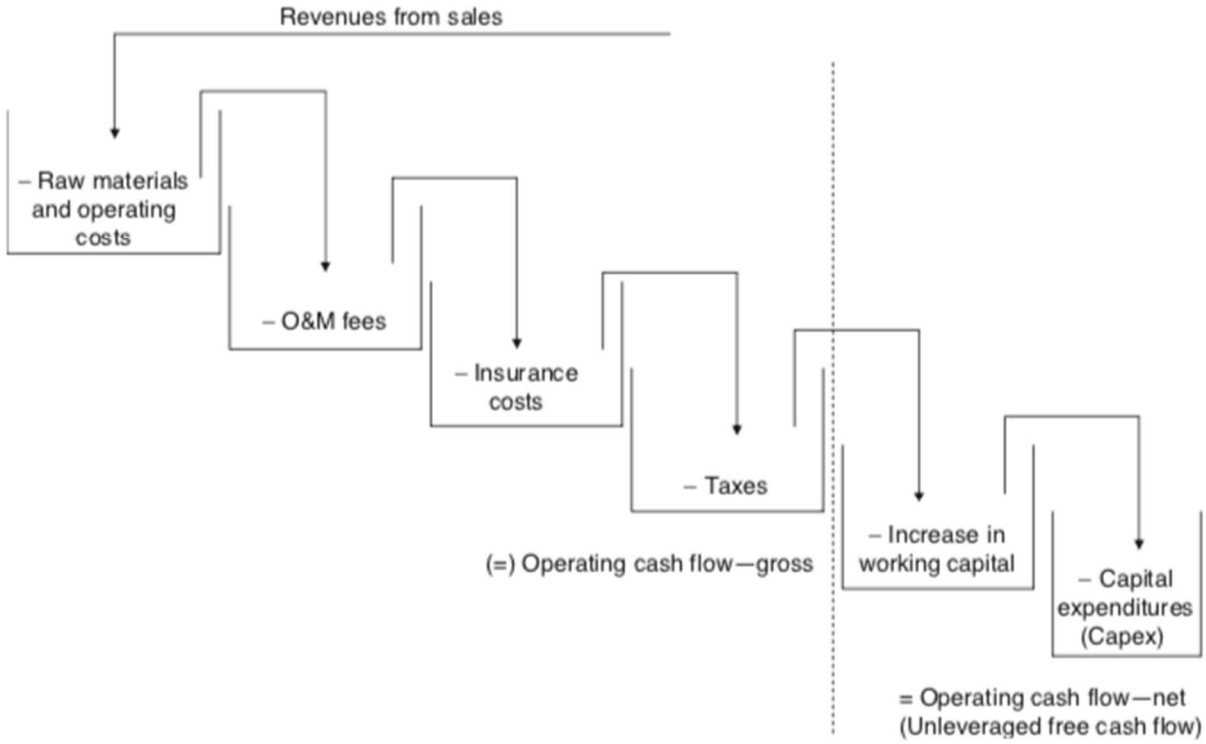
As far as hedging instruments (call options or forward contracts) as the tool against exchange rate risk used in the financial practice is concerned, the private company in my case, decided not to recourse to any of these financial tools and, instead, to manage this risk by means of the following strategy. First of all, by negotiating and making agreements with the medical equipment suppliers on the prices of the latter with the aim of total or partial "freezing" their price in advance. This very probably will imply the advance payment of the equipment, though, the resources for which the company is planning to borrow from the Bank, and which will obviously have its own cost, though lower than any hedging tool would. Moreover, in order to minimize this risk and costs, in line with the "freezing price period", the company provided for the possibility (that has also been included and reflected in the contractual agreement) to finish the project construction in less than 3,5 years as it was required by the original tender documentation, and in such a way minimizing the time gap between equipment acquisition and project commissioning.

Coming to the economic convenience of the investment project, it can be assessed in different ways. In case under examination, from the financial economic point of view it is possible to deduce the key variables for this evaluation and to determine, among other things, the NPV of the project.

$$NPV = \sum_{t=1}^{n} \frac{FCFF_t}{(1+i)^t} = -1.597 \text{ millions of rubles}$$

A negative NPV may depend both on a negative FCFF and on an excessively high discount rate (i). In the present case we can say that the negative NPV is determined by both factors. A first consideration must be made on the FCFF, which was calculated according to the classic Waterfall Structure (see Graph №10).

Graph №10 Waterfall Structure

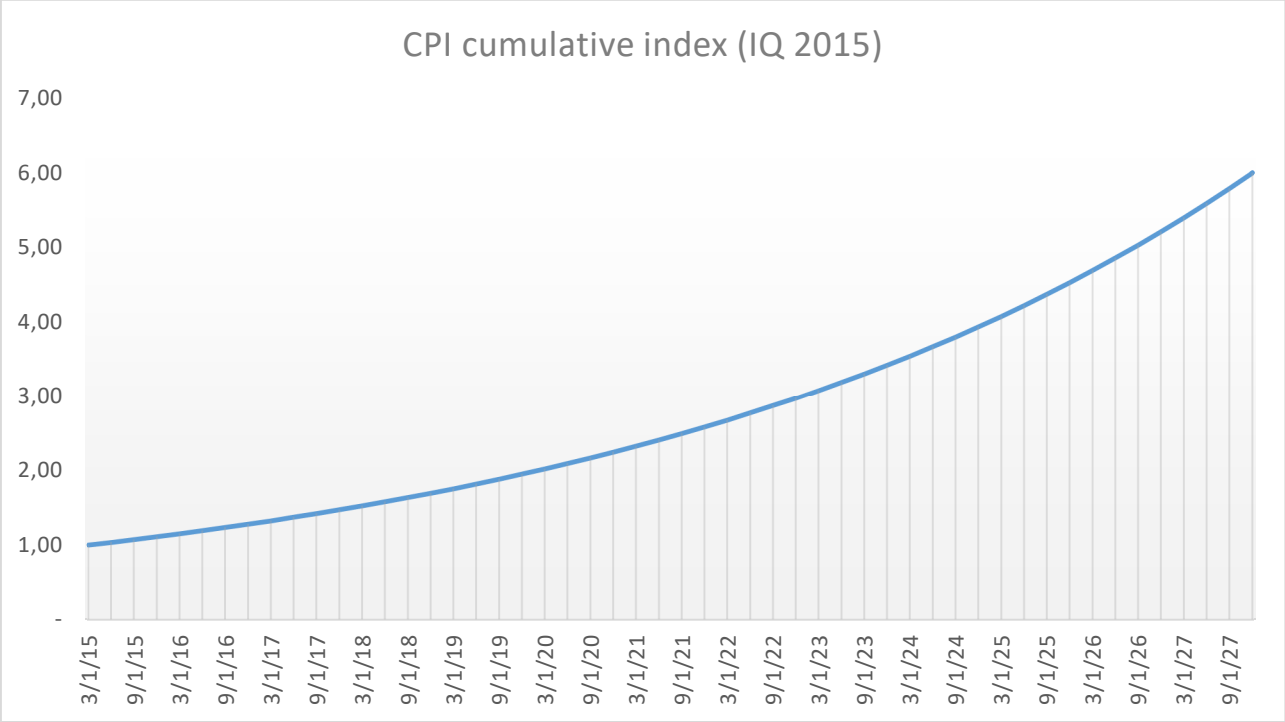


As far as inflation is concerned, the contract provides for the corrective event that allows price-indexation which in particular concerns full cost of construction and installation works for buildings and capital construction structures (which does not relate to compensation of Partner's expenses for payment of utility bills, maintenance and repair of Medical, Engineering and IT equipment and systems, payment of tax on property, VAT recovery and land lease) up to the financial closing, though, after which any price increase is borne by the company. Inflation is addressed by means of indexation through the use of the CPI (cumulative price index).

The FCFF is negative (-1.306 million rubles) as it was calculated by discounting all cash flows at prices of 2015, using a CPI cumulative index which starts from the hypothesis of an annual inflation rate of 15.1%, which remains valid for the entire duration of the project, therefore until 31.12.27. It is true that this rate of inflation in Russia was actually present in 2015 (year of project

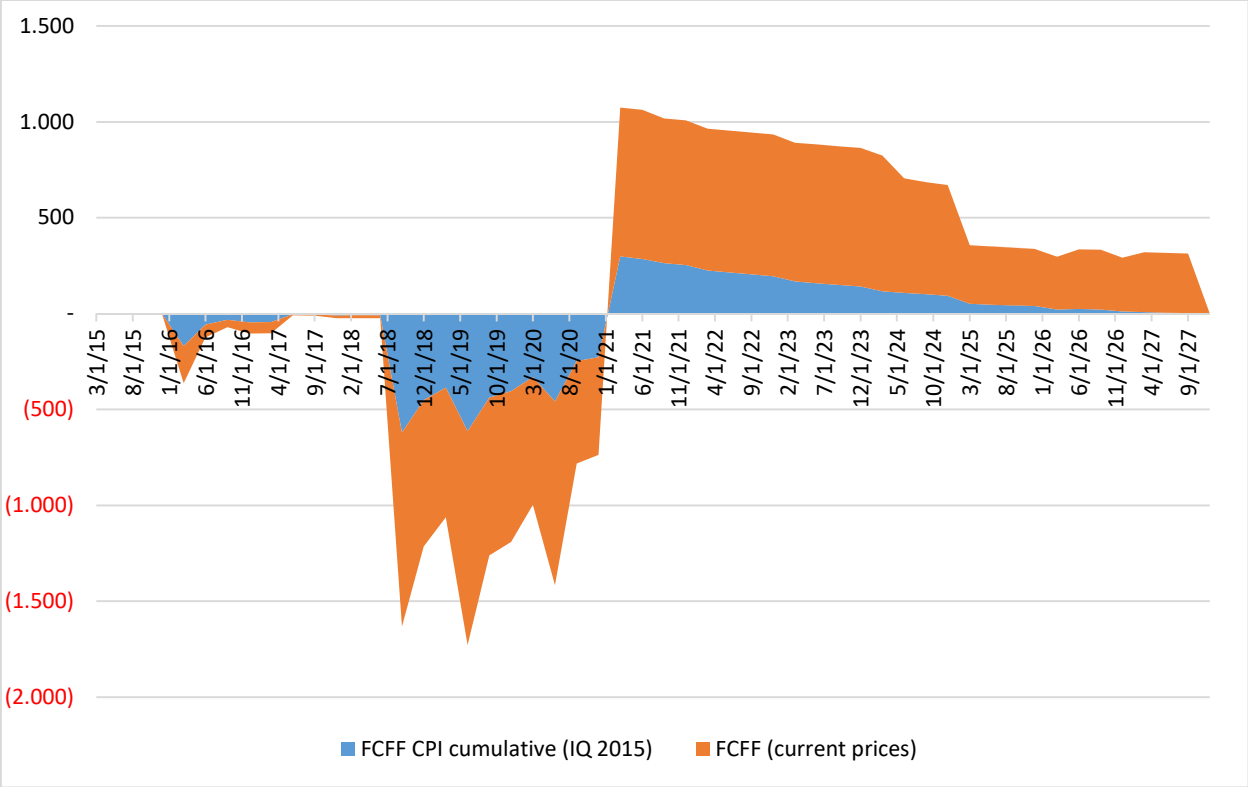
preparation), but in the following three years it has gradually decreased to around 3% today. In principle it seems correct to calculate the cash flows of an investment project taking into account inflation in a country, such as Russia, where, unlike the European Union, price growth is not kept under control by the monetary authorities.

Graph №11 CPI cumulative index (IQ 2015)



Therefore, the excessively depressing effect generated by this rate of inflation on all cash flows and especially on the positive ones that start from the beginning of the operating phase (2021) is evident. This can be seen in the graph below, where the cash flows calculated taking into account inflation and those at current prices were compared. If they had been calculated without taking inflation into account, the FCFF would have been positive (see Graph 12).

Graph №12– FCFF (IQ 2015) vs FCFF current prices



According to all corporate finance manuals, a project presenting not only a negative NPV, but also a negative FCFF should not be considered as investment at all and should be eventually rejected in being financed. In the specific case, from the interviews held with those who dealt with these aspects of the SPV, it emerged that this indicator was not taken into consideration. The decision makers rather looked at the IRR_{equity}, that was considered by them satisfactory enough to make a final decision on entering the project and becoming its investors.

The second consideration concerns the discount rate used to discount cash flows (i). The rate that is generally applied is equal to the cost of the financial resources used to support the project: the cost of capital. The cost of capital is obtained as it is known through the weighted average cost of debt and the cost of equity, according to the formula WACC = (E / V) * Re + (D / V) * Rd * (1-T)

Where, according to the assumptions contained in the PEF

E/V= 22,92%; Re=21,08%; D/V=77,08%; Rd=17%; T=20%

Therefore, the WACC is equal to 15.31%.

Also with regard to the WACC it can be noted that it is particularly influenced by the financial structure (see below) and above all by the cost of bank financing (17%), obtained from the sum between the basic interest rate (14%) and the margin applied (3%). This is, as in the case of inflation, an interest rate in effect in the Russian capital market in 2015, but that in the following years has been reduced to half. Using a lower interest rate as a discount factor would result in a higher NPV, bearing in mind that in the specific case the main problem remains that of the (negative) sign of the FCFF.

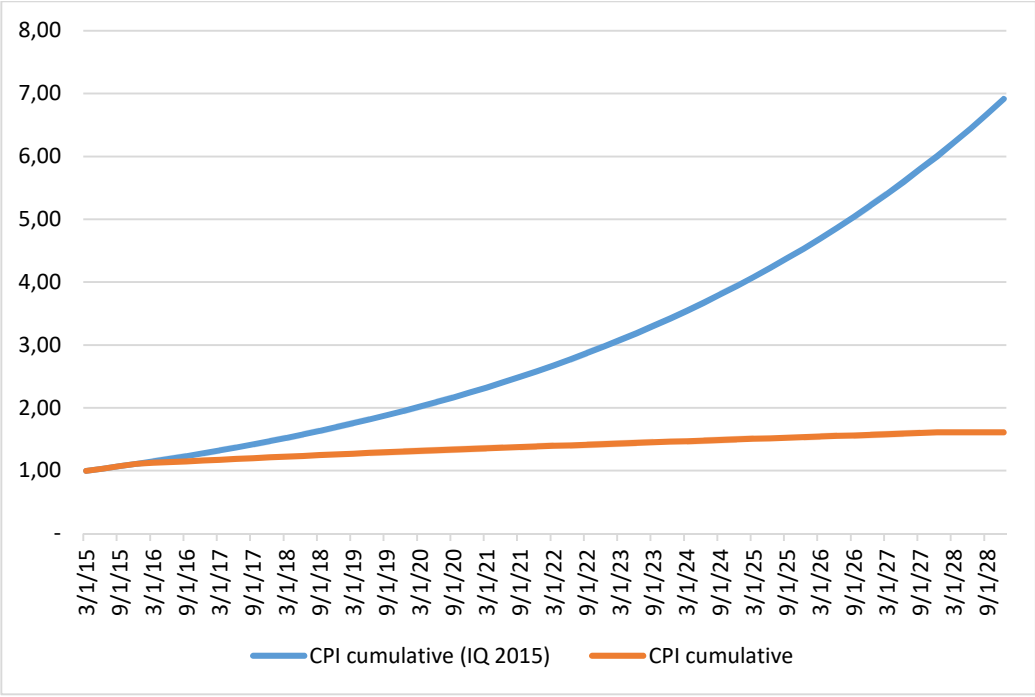
It seems superfluous to note that, precisely because of a negative NPV, the internal rate of return of the project is also negative:

$$0 = \text{NPV} = \sum_{t=1}^{n} \frac{\text{FCFF}_t}{(1+\text{IRR})^t}$$

The IRR of the project is indeed -8.99%.

Considering that the evaluations made by the SPV and other involved parties were made on the basis of just presented data, it has been in any case decided to be appropriate to correct the data related to the calculation of the FCFF considering a cumulative CPI based on a more moderate increase in inflation. And this not only because from 2016 inflation in Russia has more than halved compared to 2015, but also because in the assumptions of the PEF there was already present a cumulative CPI more in line with the forecasts for the trend of the prices of goods, services and wages (Graph №13), also used in other parts of the PEF.

Graph №13– CPI cumulative (IQ 2015) vs CPI cumulative



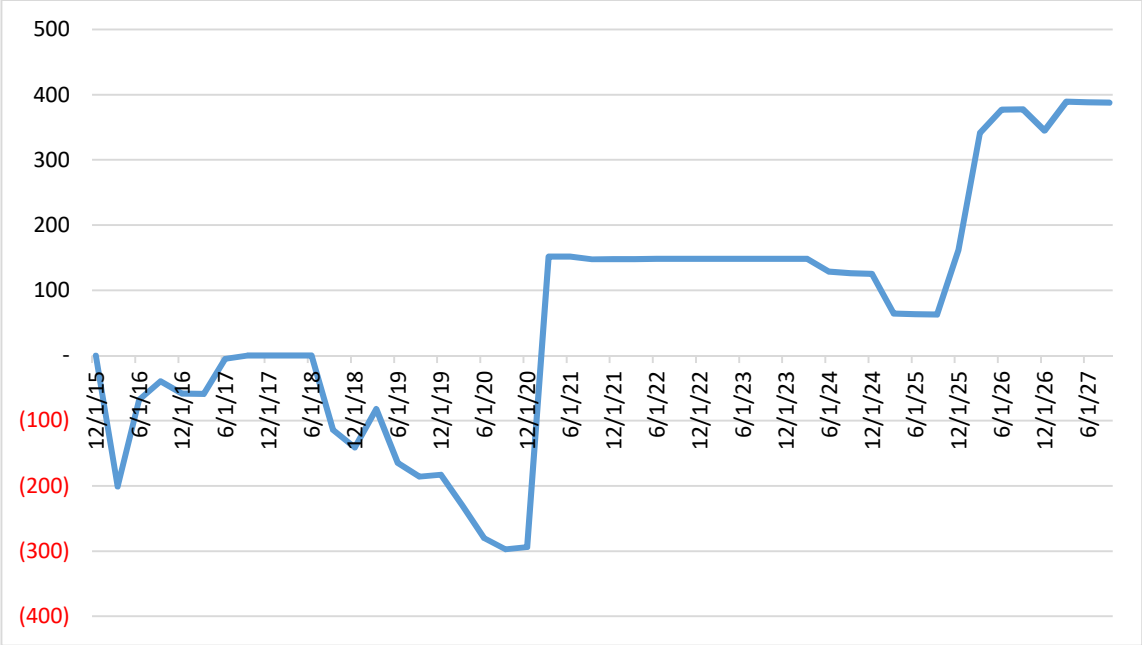
Using this cumulative CPI the indicators on the economic convenience of the project vary considerably, providing further support to the choice made by the subjects involved to continue the realization of the work. To be more exact, the FCFF returns to be positive (3,655 million rubles). However, the NPV remains negative due to the high discount rate used (WACC = 15.31%). On the other hand, the situation for the IRR calculation is quite different, going from - 8.99% (negative) to + 11.40% (positive), a yield to be considered more than sufficient if, as noted above, it is considered that starting from 2016 interest rate on the Russian market has undergone a significant reduction.

As mentioned above, the economic advantage of the project must also be assessed from the point of view of the SPV shareholders, in order to determine the level of profitability of the capital they bring. In this case, both the NPV and the IRR must be calculated for the cash flows that are due to shareholders and the discount rate used will express only the opportunity cost of the risk capital. In the specific case it is known that the SPV in addition to the real risk capital (966 million rubles) also provides debt capital (1,439 million rubles) in the form of a subordinated loan at a rate 18%. Overall, therefore, Equity finance amounts to 2,399 million rubles. In this case the incoming and outgoing flows to be taken into consideration are different from those used in the evaluation of the tout-court project. Outgoing flows are represented by cash payments of capital (equity injection) and by contributions in the form of subordinated loan (equity loan drawdown), while incoming flows are represented not only by dividends received, but also by the repayment of the subordinated loan (equity loan repayment) and related interest (equity loan interest) (see graph № 14).

Graph № 14 - Incoming and outgoing cash flows components

Equity injection	RUB mln	(960)
Equity loan drawdown	RUB mln	(1.439)
Dividends	RUB mln	2.199
Equity loan repayment	RUB mln	1.952
Equity loan interest	RUB mln	1.122
Total equity cash flow	**RUB mln**	**2.873**

Graph №15– Equity cash flow (quarterly)



In order to determine the NPV of Equity finance (Equity + Equity loan) it is necessary to determine the weighted average cost of the Equity:

Cost of equity finance = ((K (ec) * Equity capital) + (K (el) * Equity loan)) / Equity capital + Equity loan

K(ef)=((25,7%*960)+(18%*1439))/2.399= 21,08%

While cost of the equity loan (18%) is in some way linked to the cost of senior debt (17%), the calculation of the cost of equity capital, for which CAPM model was used, was much more complex. The CAPM model, for which I advise to consult the extensive existing literature on the subject, also for the most problematic aspects, assumes that the expected return of each security is equal to the sum of the risk-free rate and the market risk premium multiplied by the coefficient Beta, a parameter that measures the non-diversifiable risk of the investment and depends on the sector of activity, the degree of operating leverage (ratio between fixed and variable costs) and the degree of financial leverage (ratio between equity and debt). In the case of investment projects, the estimate of the Beta presents many problems, since it is difficult to find comparable companies (only a few project companies are listed).

Beta used in my case equals 0.77 and it is very similar to the one (0.78) indicated by Damodaran for the European companies of engineering-construction sector, and not that of the emerging markets where Damodaran puts the Russian Federation (as of January 2015 it was 1.24).

Risk free rate (8.55%) used is in line with critical situation and financial difficulties of Russia at the beginning of 2015, period in which the PEF, object of the analysis, was constructed for the first time.

$$Re=Rf+\beta*(Rm-Rf)$$

Where

Rf= risk-free rate

β= equity beta

Rm= annual return of the market

Now the NPV of the equity finance can be determined: $NPV_{equity\ finance} = \sum_{t=1}^{n} \frac{ECF_t}{(1+i)^t}$

The NPV of the equity finance is -344.

Also in this case the above considerations regarding the calculation of the NPV are valid, but only to the issue of the high discount rate used for discounting/actualization (21.08%), based on assumptions of the cost of equity and of the cost of the subordinated loan determined by the exceptional conditions of the capital market in Russia in 2015. In this regard, the representatives of the SPV have confirmed that in assessing the feasibility, the final decision on investment was not based on the NPV of the equity, but on the other index related to the Cash flow of the Equity: the IRR of the equity finance.

$$0 = NPV_{equity} = \sum_{t=1}^{n} \frac{ECF_t}{(1+IRR_{Equity})^t}$$

The IRR of the equity (15,9%) is apparently not in line (lower than) with the cost of capital, or better, with the expected return of a similar investment calculated according to the CAPM model (25,7%). However, from the results obtained by the SPV, the economic advantage of the project by the SPV was assessed by looking at the IRR of the equity calculated on the basis of the only certain elements of the entire project, i.e. the positive cash flows of the Availability Payment in the contract and outgoing cash flows deriving from the investment and operating expenses (CAPEX and OPEX) provided by the SPV itself. The SPV considered a return on equity of 15.19% congruent, demonstrating that, on the one hand, for similar investment projects (PPPs in the health sector) and on the other, for markets and countries characterized by strong financial instability (see trends in inflation and interest rates in Russia) the use of models for calculating returns expected by the investor (CAPM type) can lead to conclusions that are misleading or in any case very distant

from those based on the objective elements available to the investor. Moreover, the investor while defining the expected rate of return can consider the issues of non-financial nature such as the fact that this is the first big PPP project with which a foreign company enters the Russian market, its political importance, the publicity, and so on and so forth.

- Financial structure of the initiative

Speaking about financial structure and therefore the sources from which the SPV will draw resources to meet financial needs required for the construction, installation and maintenance of the hospital during contractually established period of time, the coverage of the PPP operation in question for 77,08% is provided by bank debt (senior debt) and for 28,92% with Equity finance. The latter is in turn divided into Equity capital and Equity loan respectively equal to 9.17% and 13.75% of the invested capital. Overall the debt / capital ratio equal to 3.36. It is therefore a typical financial structure for PPP operations.

- The financial sustainability of the project

In order to assess the project's ability to meet the commitments made to the bank that financed the initiative and therefore to assess the financial sustainability of the project, we proceed to calculate the cover ratios. These indicators allow the bank to assess the safety margin it can rely on throughout the life of the project so that the SPV pays for the debt service. Several indices can be calculated. The main hedging indices are the Debt Service Cover Ratio (DSCR) and the Loan Life Cover Ratio (LLCR).

The DSCR is equal to the ratio, calculated for each year of the project's operating life, between the operating cash flow and the debt service for capital shares, interest and possible commissions.

$$DSCR=\frac{CFADS_t}{(I+C)_t}$$

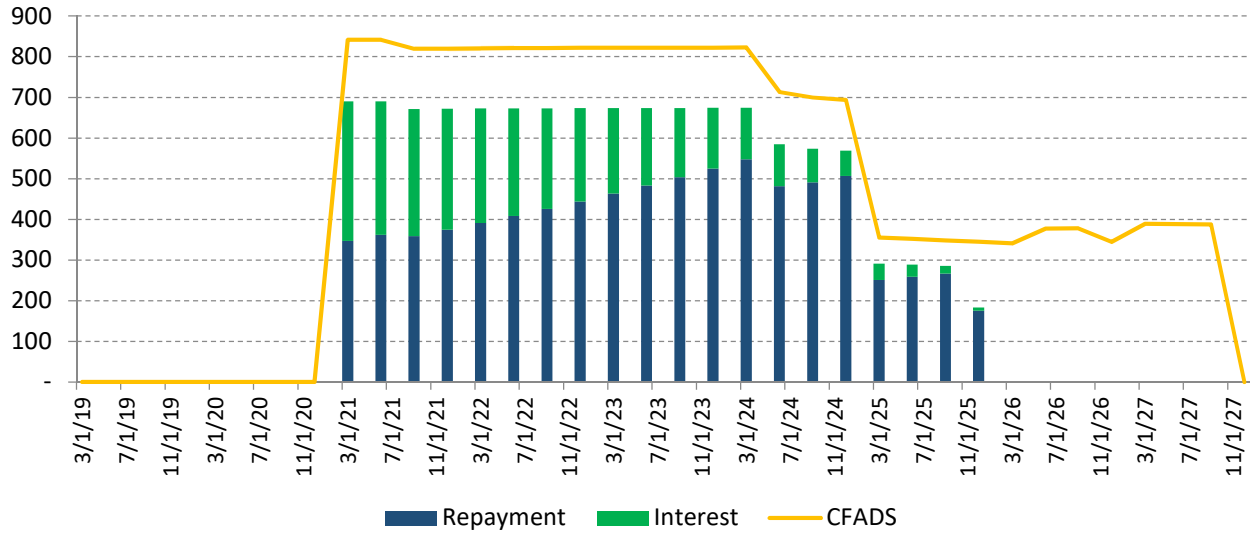
The minimum DSCR required by the agreements is 1.2 and as shown in the table below, the DSCR of the project is constantly higher than this value

Graph № 16 – Debt Service Cover Ratio

	2021	2022	2023	2024	2025
CFADS	3.323	3.285	3.289	2.929	1.400
Debt service	2.724	2.692	2.696	2.401	1.048
DSCR	1,22	1,22	1,22	1,22	1,34

Moreover, as it can be seen from the graph, in every year of the operational phase, the financial resources generated by the project are higher than the disbursements necessary for the payment of the principal amount of the debt and the related interest.

Graph №17 – Service of Senior debt at the operation stage, rbl mln



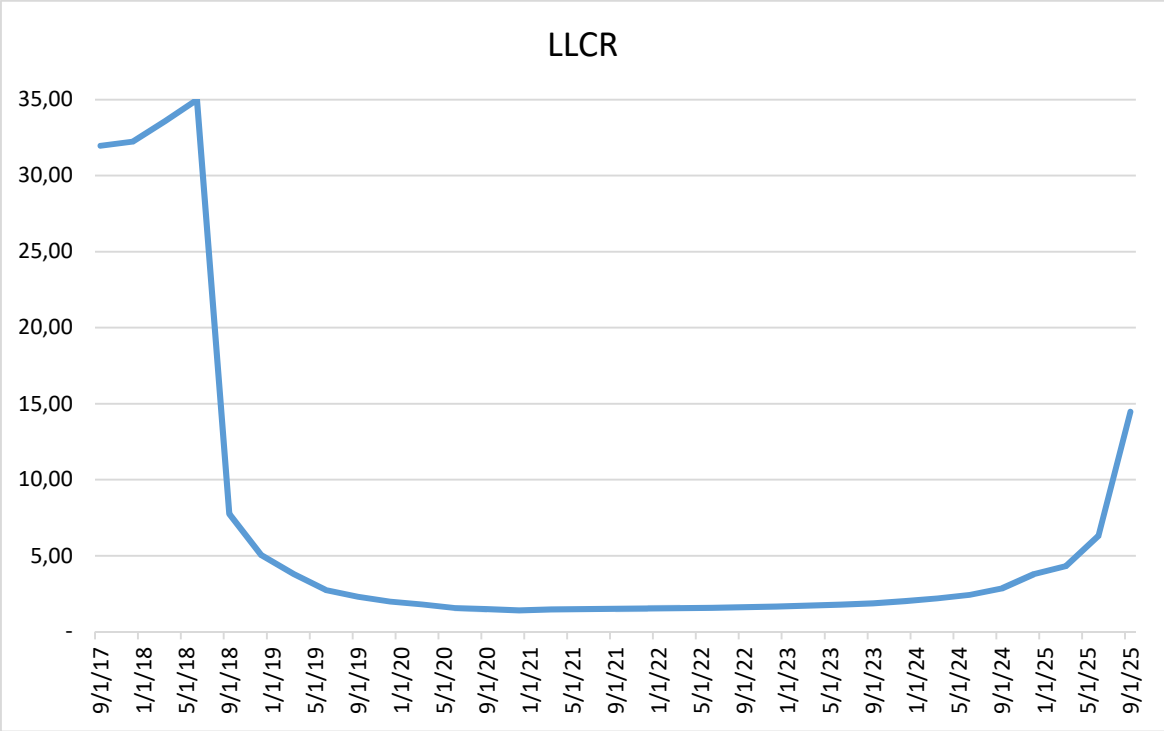
The second coefficient of coverage that is used is the Loan Life Cover Ratio, given by the ratio between the discounted sum of operating cash flows, calculated between the valuation instant (s) and the last year envisaged for the repayment of loans (s + n), and the residual debt considered at the same time (s).

$$LLCR=\frac{\sum_{t=s}^{s+n}\frac{CFADS_t}{(1+i)^t}}{O_t}+DR$$

The minimum LLCR required according to the agreements is 1.1, while as it can be seen from Graph № 17 the LLCR of the project remains constantly above the value of 1.4, which is the minimum reached by the index in correspondence with the level of maximum indebtedness at the end 2020 (end of construction period). The U-shaped trend of the index is due to the limited use

of debt capital in the first phase of the project, which is instead financed by equity and the subordinated loan, and the rapid amortization of the bank debt that is extinguished with about 2 years in advance of the completion of the operational phase, when the cash flows deriving from the AP are still high.

Graph №18 – Loan Life Cover Ratio



Another method of evaluating investment project is the calculation of the Payback Period, which in our case, though, is little representative for the following reason. The Payback Period is almost 9 years, that is a rather long PBP for an investment project, but in this specific case the significance of the indicator is conditioned by the contractual clauses present from the moment of the tender. This refers to the manner and timing with which the public administration will pay the Availability Payment which, as confirmed by the project's financial manager, is used first to supplement the senior debt and equity loan coverage and only in the last two years is used to repay and remunerate equity. The PBP is so long also due to the intrinsic PPP feature, that is, because between the phase of the tender in which the first capitals are invested in the form of equity and the financial close (start of construction) there are three years that pass. In any case, as it also emerged from the interviews with the company this indicator hasn’t been taken into consideration.

Conclusions

The purpose of this study was to examine the dynamics and rationale of transnational public private partnership in the Russian Federation with a specific reference to a case study of a healthcare project partnered by the Italian company. The purpose of this work was also to explore the challenges and prospects of this new for Russia infrastructure implementation method in the healthcare sector in the light of this country current PPP market and general economic conditions. The conclusions and recommendations drawn from this research will be of value for future foreign sponsors and investors willing to enter the Russian PPP market for implementing a project in healthcare or any other adjacent social sector undertaking. It also contributes to the existing active international debates on PPP, in particular healthcare PPP, by providing a comprehensive description and deep analysis of a real case.

This study showed that the main principle of risk bearing as well as the principle of project's financial sustainability can not be always univocally transferred into practice especially in the healthcare sector and in particular in emerging economy country, because of different purposes of public private partnerships and the project's socially sensitive character (Brinkerhoff and Brinkerhoff 2011). The former finds its reflection in the fact that the reality, "personified" in my work by the case under study, doesn't always fit with the theory of acceptability of the project, at least from the rigorously financial point of view. This "theory-practice" divergence in my case can be explained by the presence of not only different purposes of a particular PPP project, but also by multiple of various targets pursued by the private partner, what obviously can not ignore the influence of transnational character of the operation. It is true that the private sector is legitimately driven by the profit making, the fact that the public partner should recognize and accept (Nishtar 2004), it is also should be born in mind, that besides profit drive, a significant aspect of any PPP undertaking, there are other considerations (conquest of new markets, publicity, etc.) made by the private company that, as in my case, overshadowed even some important profitability indicators.

The issue of PPP representing "something of a bonanza" for the private partner was called in question and was considered quite problematic already in 2006, mainly caused by the lack of transparency in financial reporting (Hood et al. 2006). Though being often accused in requesting excessive profits, this work has demonstrated that, due to the uniqueness of each project, determined by each country's unique mix of factors of different nature, only a case by case attentive and detailed study and analysis of the financial and contractual documentation can define the private party real profits both in monetary and noncommercial terms, as well as to make conclusions about the motives that drove it in acting that or another way. Coming back to a second

reason of “theory-practice divergence”, i.e. the project socially sensitive character - it is social nature of the health facility, together with Russian current macro-economic environment and its lack of expertise in such projects’ implementation was one of determining factors that made the government entrust the project to the international expert in that sphere at a probably quite high price, as compared to the conventional public procurement method.

This work analyzed the challenges as well as rationale behind decisions of the company that enters a foreign PPP market of one of the emerging economy countries, quite new to this infrastructure implementation method. It also shed light on the reasons underpinning the developing country’s decision on entering into complex PPP deal involving a foreign private partner. Through a single-case case study and qualitative research approach this work, by demonstrating the complexity of relations, challenges and considerations to be made by each PPP participant, enhanced the understanding of this tool within Russian healthcare PPP market framework seen by the foreign company and demonstrated why and how a particular project decision is taken.

Through an in-depth review of the past and present of the Russian healthcare system, as well as PPP method evolution and its level of application and development in Russian health PPP projects, the conclusions have been made on Russian society’s readiness for a qualitative shift in healthcare services provision, as well as on the citizens awareness about the impossibility to bring to life this goal without private partner’s expertise and his financial resources, together with professionally prepared public entities and evolved institutional and regulatory frameworks. This study has also managed to develop one of the financialization aspects of PPP, the project finance, to be more exact, together with its implications, thus, following one of the new and promising research directions recently proposed as such by Hodge and Greve, by showing a kind of a unique composition of SPV in terms of financial capital, or to be even more precise, a particular “double” role the bank plays in this transaction as well as importance of strong host government shoulder (Hodge and Greve 2018).

It wasn’t my aim to make a comparison of the “Russian PPP model” with the European or any other country’s model, mainly because “countries learn fast from each other”, because PPP is not a “one-size fits all” solution and because due to each country’s typical only of it conditions it is impossible as well as undesirable and senseless to build a blueprint for PPP development in healthcare (Idem; PwC 2018; Jutting 1999). That is why, considering transnational character of my case study in particular, internationalized character of PPP phenomenon in general, as well as interdependency between politics and markets, I decided to follow Hodge and Greve advice and to embrace a “multidisciplinary analytical approach” in order to produce an all-encompassing picture of one particular healthcare PPP operation in one particular country considering and

analyzing its “relevant government system and market factors” (Hodge and Greve, 2018). This study, by sharing a detailed and comprehensive description and analysis of PPP unique and unrepeatable experience, provides a valuable reference for academicians, practitioners and policy makers for better understanding and appreciation of this recent research trend.

The work performed in the literature review chapter, instead, aimed at reviewing the existing literature on PPP, made it possible to achieve two goals. Firstly, it has highlighted the main issues and challenges related to the application of PPP. The second result is represented by the fact that in this way I managed to build a conceptual basis to be used in my future study on the PPP in the context of middle-income, developing countries at the example of the Russian Federation, the most advanced from the PPP point of view country. Given the complex nature of PPP I considered it appropriate to begin with a critical survey of the major issues and problems relating to its application in order to build a theoretical and practical framework to be used as a conceptual basis for the study of a specific case. This is exactly what the literature review chapter was aimed at. After a quick overview of the origins and recent developments of PPP considering also the effects of the financial crisis, the first important question I undertook related to the controversy over what is meant by PPP. The study of literature revealed another crucial aspect, concerning the boundaries between different modes of the private sector participation in infrastructure services provision.

Further study regarded the analysis of the strengths and weaknesses of PPP as compared with the traditional public procurement, as well as the reasons for government involvement. Later the key elements and distinctive features of PPP have been identified which are of fundamental importance for the correct understanding of the tool and its practical application. In this regard, one the one hand, the PPP success defining elements have been examined and on the other, the risk allocation issue - a determining factor for the PPP existence - has been covered. Considering that project finance constitutes the main, not to say the only method of PPP financing, the most recent literature on the subject allowed me to construct the scheme of the project finance to be applied while studying PPP. The decision-making process concerning the selection of modes to be used in the construction and management of infrastructure has been analyzed with reference to such issues as value for money, PSC, affordability, intertemporal budget constraints, fiscal rules and some other elements important for the economics of PPP.

Another topic that was taken into consideration from the examined literature is the importance of political issues and preconditions necessary for PPP to exist, because the political will and commitment are decisive in defining the institutional and regulatory framework within which PPP takes form. One of the recently emerged themes closely linked to the role of public administration is the issue of corruption that, as it has been revealed, did not receive proper

attention yet. Whereas there has been highlighted the need to assess the impact of PPP not only from the strictly economic and technical point of view, but also from the ethical-social and general societal welfare perspective. Finally, the topic related to the application and challenges presented by PPP in emerging and developing countries has been covered, the issue considered to be a starting point for the analysis of the case study in my final thesis work.

The literature review analysis allowed to reveal vast but highly fragmented body of knowledge on PPP topic, very probably explained both by multitude of areas of knowledge it involves, multiple participants and therefore heterogeneity of interests and objectives, complexity of PPP operations, as well as one-sided view of PPP and its effects only from the public administration perspective together with the difficulty in obtaining complete and transparent data from the private partner of the deal. Another critical point revealed in the result of the literature review arising from the before mentioned unbalanced view of PPP is the lack of studies based on empirical analysis and scarce evidence base for implementation of real case studies. The latter is even more salient in developing countries, or those who have only recently introduced PPP legal regulating frameworks and appropriate institutions and are just at the initial phase of acquaintance with this infrastructure provision tool (like for example the Russian Federation). For all the above reasons getting access to a real life PPP project, its study from financial, legal and social points of view, understanding of rationale behind the decision making process of both private and public actors and evaluation of the importance of certain factors over others deemed to me a logical and best, among all available options, conclusion of the descriptive part of the research, which allowed to draw a number of implications for scholars and practitioners.

Regarding these implications, a first consideration to make is that project finance seems to be an indisputably best method to implement a PPP operation. Although practical application of the PF and the evaluation of economic feasibility of the project is not based simply on calculation of indices, rates provided by the financial manuals (cashflow, rates of return, and others) as it emerged also from the case under study. Even wishing to generalize, financial evaluation must incorporate rules and constraints that, on the one hand, are typical of the PPP operation and, therefore not easily comparable with simple investment projects, and on the other hand, are in many cases linked to specific conditions (institutional, legal, social, political) of the countries in which the project is to be implemented. Therefore, the two put together make the combinations of operational tools for PPP project accomplishment multiple. Taking into account the fact that the realization of the PPP does not require the achievement of the objectives of the construction company only, main partner of the SPV, whose objectives again are not only attributable to economic-financial ones, the distribution of risks between subjects does not always find an effective answer on a financial level. Just as quantitative tools alone very seldom manage to give

us a complete picture of a situation, trying to understand the rationale of investment decision making process, especially within PPP project framework, basing only on financial ratios and indexes will definitely lead us to incorrect and incomplete conclusions.

Among work's limitations there is first of all the usage of a single case study with its well-known threats, generalisabilty being the most "dangerous" one. This limitation can though be partially justified by the extreme difficulty to access the all-encompassing data and information on a PPP project due to the official documentation confidential status, very often sensitive nature of the subjects and objects involved as well as the young age of PPP as a mechanism of infrastructure implementation in Russia in general and therefore limited extent of such PPP social infrastructure as hospitals, what all together would make a multiple case study approach both irrelevant and close to impossible. For the reasons that have already been mentioned above, to be more exact, the peculiar characteristics of the PPP operation such as that analyzed in the present work, a further limitation is represented by the difficulty in comparing it with other projects, as well as, considering their rather long duration, the difficulty in comparing between ex-ante and ex-post results.

As one of the prospective directions for further study the empirical investigation on actual clinical outcome performance of publicly procured hospitals and those implemented through a PPP mechanism in the Russian Federation can be undertaken. Due to the novelty of a PPP tool for the Russian market, the comparison will probably suffer from a little number of PPP hospitals, but it still can provide a first reference regarding efficiency as well as the prevalent purpose of such public-private collaborations in Russian healthcare sector. Another possible research topic can be the investigation of the financing modes of PPP healthcare initiatives with a particular attention paid to debt/equity mix, the role of the bank and role of the government guarantees in the feasibility of a project, as well as different implications or impact determined by projects' different financial structures.

Therefore, the main, "global", aim of my case study research consisting in verifying to what degree the results that have emerged from at times too generic, at times too specific literature, finds correspondence at the practical PPP level has been achieved. In the result of application of a theoretical (build during the literature review), economic and legal (constructed afterwards) frameworks of a PPP, as it pertains to a transnational project, to a real case study, the rationale underpinning the decision making process in such undertaking has been unveiled. If 20 years ago, after having reviewed the rationale behind PFI before and considered the themes proposed by their academic predecessors, PFI was proclaimed by Wall and Connolly as a worldwide valid method of developing public sector infrastructure (not excluding of course the classical government procurement) it is even more so in 2020 (Wall and Connolly 2009). It's impossible to turn back

the PPP clock, but what is possible, moreover, highly advisable, is to apply "multidisciplinary analytical approaches and ideas" in order to study countries' unique experiences where PPP is becoming the protagonist of the country's infrastructure investment arena and to draw meaningful conclusions on possible improvements of this multifaceted tool for the wellbeing of all its participants (Hodge and Greve, 2018). Once the goal of the multidimensional and deep study of the country's PPP experience is achieved one can start thinking about comparative research in order to learn not only how PPP mechanism functions but also to know better its limits and to get insights into its so-far-unexplored possibilities within the PPP emerging economies area (Corneo 2017).

References

Akbiyikli, R. and D. Eaton (2004). Risk Management in PFI Procurement: A Holistic Approach in: Khosrowshahi, F (Ed.), 20th Annual ARCOM Conference, 1-3 September 2004, Heriot Watt University. Association of Researchers in Construction Management, Vol. 2, 1269-79.

Akintoye, A. and E. Chinyio (2005). Private Finance Initiative in the Healthcare Sector: Trends and Risk Assessment, *Engineering, Construction and Architectural Management*, 12(6):601–616.

Akintoye, A., Beck, M. and C. Hardcastle (2003). *PPP: managing risks and opportunities*, Blackwell Publishing Ltd.

Albisetti, R. (2000). *Finanza Strutturata: Tecniche e strumenti per la valutazione degli investimenti internazionali nel project financing*, Etas.

Alpatov, A., Pushkin, A. and R. Japaridse (2010). *State-Private Partnership Implementation Mechanisms* (in Russian), Pushkin A.V., "Alpina Publishers",

Ameyaw, E. E. and A.P.C. Chan (2015). Risk ranking and analysis in PPP water supply infrastructure projects: an international survey of industry experts, *Facilities*, 33(7/8): 428-453.

Anderson, S. (2011). Public, private, neither, both? Publicness theory and the analysis of healthcare organizations, *Social Science & Medicine*, 74: 313 – 322.

Asenova, D. (2010). *Risk Management in Private Finance Initiative Projects: The Role of Financial Services Providers*. Lambert Academic Publishing, Saarbrücken.

Atun, R.A., Samyshkin, Y.A., Drobniewski, F., Kuznetsov, S.I., Fedorin I.M. and R.J. Coker (2005). Seasonal variation and hospital utilization for tuberculosis in Russia: hospitals as social care institutions, *The European Journal of Public Health*, 15(4): 350–354.

Avtsinov, O.I. (2014). Project Implementation Features of the Public-Private Partnership in Russia (in Russian), *Vestnik TTTY*, 20 (4).

Badalov, L., Sedova, N. and M. Mishagina (2017). (1). Public-Private Partnership in The Social Infrastructure of the Russian Federation: Features, Problems, Strategic Directions for Implementation, *Academy of Strategic Management Journal*, 16(2).

Badalov, L., Sedova, N., Mishagina, M., Fedotova, M. and E. Stolyarova (2017). (2). Public-Private Partnership Based Projects as a Mechanism to Form Social Infrastructure in the Regions of the Russian Federation, *Revista Espacios*, 38(62): 28.

Barr, D.A. (2007). A Research Protocol to Evaluate the Effectiveness of Public–Private Partnerships as a Means to Improve Health and Welfare Systems Worldwide, *American Journal of Public* Health, 97(1).

Baumgärtner, F., Essler, T. and R. Scharping (2009). *Public-private Partnership in Deutschland*, Frankfurt am Main : FAZ-Inst. für Management-, Markt- und Medieninformationen.

Becker, F. and V. Patterson (2005). Public-Private Partnerships: Balancing Financial Returns, Risks, and Roles of the Partners, *Public Performance and Management Review*, 29(2):125-144.

Berezin, A., Gorodnova, N., Shablova, E. and N. Briery (2015). Economic and Legal Aspects of the Public-Private Partnership Model Development in Russia, SGEM 2015 International Multidisciplinary Scientific Conferences on Social Sciences and Arts.

Berg, S.V., Pollitt M.G and M. Tsuji (2002). *Private initiatives in infrastructure*, Cheltenham: Edward Elgar.

Blanken, A. and G. Dewulf (2010). PPPs in Health: Static or Dynamic? *The Australian Journal of Public Administration*, 69(1):35–47

Borgonovo, E. and L. Peccati (2004). Sensitivity analysis in investment project evaluation, *International Journal of Production Economics*, Elsevier, 90(1):17-25.

Bovaird, T. (2004). Public-private partnerships: From contested concepts to prevalent practice. *International Review of Administrative Sciences*). Sage publications, 70 (2): 199-215.

Brinkerhoff, D. and J. Brinkerhoff (2011). Public-private partnerships: Perspectives on purposes, publicness and good governance, *Public Administration and Development*, 31, 2–14.

Broadbent, J. and R. Laughlin (1999). The PFI: clarification of a future research agenda, *Financial Accounting &Management,* 15(2): 0267-4424.

Bull P. (1995). "Capital leasing in project finance" in Shaughnessy H. (Eds.), *Project Finance in Europe,* John Wiley and Sons, ppl17-138.

Burger, P. and I. Hawkesworth (2011). How to attain value for money: Comparing PPP and traditional infrastructure public procurement, *OECD Journal on Budgeting*, 2011(1):1-56.

Campbell, G. (2001). Public-private partnerships – a developing market? Melbourne, unpublished.

Cangiano, M., Hemming, R., and R. Ter-Minassian (2004). Public Private Partnership: Implications for public finances, International Monetary Fund, Office of Budget and Planning, Fiscal Affairs Department.

Cappellaro G. and F. Longo (2011). Institutional public private partnerships for core health services: evidence from Italy, *BMC Health Services Research*.

Caselli, S., Corbetta, G., and V. Vecchi (2015) (Eds.) *Public private partnerships for infrastructure and business development: principles, practices, and perspectives*, New York: Palgrave Macmillan.

Cavaye A.L.M. (1996). Case study research: a multi-faceted research approach for IS, *Info Systems Journal*, 6:227-242.

Cavelty, M. D. and M. Suter (2009). "Public–Private Partnerships are no silver bullet: An expanded governance model for Critical Infrastructure Protection", *International Journal of Critical Infrastructure Protection*, 4(2):179-187.

Chan, APC; Lam, PTI; Chan,DWM. and E. Cheung (2008). Risk-Sharing Mechanism for PPP Projects – the Case Study of the Sydney Cross City Tunnel, *Surveying and Built Environment*, 19(1):67-80.

Chang, L.M. and Chen, P.H. (2001). BOT Financial Model: Taiwan High Speed Rail Case, *Journal of Construction Engineering and Management,* 127(3):214 – 222.

Chapman, C. and S. Ward (2004). Why risk efficiency is a key aspect of best practice projects*, International Journal of Project Management, 22:619–632.*

Chizhevskaya, E. and L. Magomaeva (2014). Economic Prospects for Public-Private Partnership in Russia and European Union, *Asian Social Science*, 11(2).

Chou, J. and D. Pramudawardhani (20159. Cross-country comparisons of key drivers, critical success factors and risk allocation for public-private partnership projects, *International Journal of Project Management*, 33 (5): 1136-1150.

Chung, D. K. and M. Meissner (2011). Public Private Partnerships in Social Protection, Background and discussion paper for: ASEM Forum On Social Safety Nets: Enhanced Cooperation to Address Post – Crisis Challenges, Hanoi, Vietnam 18 – 19 April 2011.

Clark, G., Monk A., Orr R. and W. Scott (2012). The new era of infrastructure Investing, *Pensions*, 17(2):103-111

Clifton, C and C.F. Duffield (2006). Improved PFI/PPP Service Outcomes through the Integration of Alliance Principles, *International Journal of Project Management*, 24(7):573-586.

Cocq, K. and D. A. McDonald (2010). Minding the Undertow: Assessing Water "Privatization" in Cuba, *Wiley Online Library.*

Coghill, K. and D. Woodward (2005). "Political issues of public-private partnerships" in Hodge G. and C. Greve (Eds.), *The Challenge of Public–Private Partnerships*, Edward Elgar Publishing.

Comana M. (2003). *Il project financing per le opera di media dimensione*, Franco Angeli, Milano.

Connolly, C., Reeves E. and A. Wall (2009). Isomorphism: An Explanation For The Popularity Of Public–Private Partnerships?, *Irish Accounting Review*, 16(1):1-19.

Coovadia, H., Jewkes R., Barron P., Sanders D. and D. McIntyre (2009). The health and health system of South Africa: historical roots of current public health challenges, *The Lancet.*

Corbacho, A. and G. Schwartz (2008), "PPPs and fiscal risks: should government worry?" in Schwartz, G., A. Corbacho and K. Funke (Eds.), *Public investment and public-private partnerships: Addressing infrastructure challenges and managing fiscal risks*, New York: Palgrave Macmillan.

Corneo, G. (2017). *Is Capitalism obsolete?* Cambridge: Harvard University Press.

Corner, D. (2006). The United Kingdom private finance initiative: The challenge of allocating risk, *OECD journal on budgeting*, 5(3):37-55.

Cox Jr., L.A., Babayev D. and W. Huber (2005). Some limitations of qualitative risk rating systems, *Risk Analysis,* 25(3).

Cox L.A.T. (2008). What's Wrong with Risk Matrices?, *Risk Analysis*, 28(2).

De Marco, A. and G. Mangano (2013). Risk and Value in Privately Financed Health Care Projects, *Journal of Construction Engineering and Management*, 139(8):918-926.

Della Croce, R. and S. Gatti (2014). Financing infrastructure – international trends, *OECD Journal: Financial market trends*, 2014(1), 123-138.

Delmon, J. (2011). Public-*Private Partnership Projects in Infrastructure: An Essential Guide for Policy Makers*, Ney York: Cambridge University Press.

Dewulf, G. and M. Bult-Spiering (2006). *Strategic issues in public-private partnerships: An international perspective*, Oxford: Blackwell Publishing.

Dewulf, G., A. Blanken and M. Bult-Spiering (2012). *Strategic issues in public-private partnerships, second edition.* Oxford: Wiley-Blackwell.

Eaton, D. (2003). Price Bidding, Bid Evaluation and Financial Management, Lecture

EC (2004). Green Paper on PPPs and community law on public contracts and concessions, COM (2004) 327 Final, European Commission, Brussels.

EC (European Commission) (2003). Guidelines for successful public-private partnerships, Directorate-general regional policy, European commission, Brussels, http://ec.europa.eu/regional_policy/sources/docgener/guides/ppp_en.pdf. Accessed on January, 15, 2016.

Engel, E., Fischer, R. and A. Galetovic (2010). The economics of infrastructure finance: PPP VS Public Provision, EIB Papers, 15(1), pp.41-69.

Engel, E., Fischer, R.D. and A. Galetovic (2014). *The economics of public-private partnerships: a basic guide,* New York: Cambridge University Press.

English, L., 2005. Using public and private partnerships to deliver social infrastructure: the Australian experience. In: Hodge, E., Carsten, G. (Eds.), *The Challenge of Public and Private Partnerships: Learning from International Experience,* Edward Elgar, Cheltenham, UK, pp. 290-304.

EPOS Health Management, (2013). Health and Economics Analysis for an evaluation of the Public Private Partnerships in health care delivery across EU, European Union.

Esty, B. 2004. "Why study large projects? An introduction to research in project finance", *European Financial Management*, 10:213-224.

Eurostat News Release. New decision of Eurostat on deficit and debt treatment of public-private partnerships (2004).

Fabozzi F.J and P. K. Nevitt (2000). *Project financing*, Euromoney Books.

Fedotova, I. (2011). Foreign Direct Investment in the Russian Federation and Their Role in Regional Economies, *Srednerusskiy Journal of Social Sciences*, 3:157-161.

Felicetti, C. (2007). PPP e Project Finance. Il trasferimento dei rischi e i payment mechanism nei contratti di PPP, Forum P.A. – Roma

Finnerty, J.D. (1996). *Project Financing,* 1996, Wiley, New York.

Fridlin, I. (1996). International construction—New opportunities, MS thesis, Polytechnic University, Brooklyn, N.Y.

Froud, J. (2003). The Private Finance Initiative: Risk, Uncertainty and the State, *Accounting, Organizations and Society*, 28(6): 567–589.

Gallimore, P., Williams, W. and D. Woodward (1997). Perceptions of risk in Private Finance Initiative, *Journal of Property Finance,* 8(2):164-176.

Gatti S. (2008). *Project Finance in Theory and Practice: Designing, Structuring, and Financing Private and Public Projects*, Elsevier Inc.

Gatti S. (2017). "Project Finance" in Caselli S. and S. Gatti (eds.), *Structured Finance. Techniques, Products and Market*, Springer.

Gatti, S. (2005). "Le operazioni di finanza strutturata: il project finance" in G. Forestieri (ed.), Egea.

Gatti, S. (2012). *Project finance in theory and practice*, II ed. San Diego: Academic Press.

Gonchar K. and P. Marek (2014). The Regional Distribution of Foreign Investment in Russia: Are Russians more appealing to multinationals as consumers or as natural resource holders?, *Economics of Transition*, 22(4): 605-634.

Greco, L. (2015). Imperfect bundling in public-private partnerships, Journal *of Public Economic Theory,* 17 (1):136-146.

Greve, C. and G. Hodge (2013). (Eds.) *Rethinking public-private partnerships: strategies for turbulent times*, London; New York: Routledge.

Grimsey D. and M. K. Lewis (2002). Evaluating the risks of public-private partnerships for infrastructure projects, *International Journal of Project Management*, 20:107-118.

Grimsey D. and M. K. Lewis (2005). Are Public Private Partnerships Value for Money? Evaluating Alternative Approaches and Comparing Academic and Practitioner Views, Accounting Forum, 29(4): 345-378.

Grimsey, D. and M. K. Lewis (2007). Public-private partnerships and public procurement, *Agenda,* 14(2), 171-188.

Grimsey, D. and M.K. Lewis (2004). *Public-private partnerships: the worldwide revolution in infrastructure provision and project finance*, Cheltenham; Northampton: Edward Elgar.

Grimsey, D. and M.K. Lewis (2004). The Governance of Contractual Relationships in Public–Private Partnerships*, Journal of Corporate Citizenship*, 15: 91-109.

Gunhan, S. and D. Arditi, D. (2005). Factors affecting international construction, *Journal of Construction Engineering and Management*, 131(3).

Hall, D. (2008). Public Private Partnerships (PPPs) summary paper. Discussion Paper. PSIRU, London, UK.

Hammami, M., Ruhashyankiko, J-F. and E. B. Yehoue (2006). "Determinants of public-private partnerships in infrastructure", IMF working paper, Washington, DC.

Hart, C. (1998). *Doing a literature review: Releasing the Social Science Research Imagination,* Sage Publications.

Hastak, M. and A. Shaked (2000). *ICRAM-1:* Model for International Construction Risk Assessment*, Journal of Management in Engineering,* 16 (1):59-69.

Hayes, N. (2000). *Doing psychological research: Gathering and analyzing data,* Open University Press Buckingham, Philadelphia.

Heald, D. (2003). Value for money tests and accounting treatment in PFI scheme, *Accounting, Auditing & Accountability Journal*, 16 (3).

Hefferman, S. (1986). *Sovereign Risk Analysis*, Unwin Hymen, London.

Hellowell, M. and A. M. Pollock (2009). The Private Financing of NHS Hospitals: Politics, Policy and Practice, *Journal compilation, Institute of Economic Affairs*, Blackwell Publishing, Oxford.

Hellowell, M. and A.M. Pollock (2007). Private Finance, Public Deficits: A Report on the Cost of PFI and its Impact on Health Services in England. Edinburgh: The Centre for International Public Health Policy, University of Edinburgh.

Her Majesty's Treasury (HMT), (2006). Departmental Rep., St. Clements House, Norwich, UK.

Hodge, G. A. and C. Greve (2018). Contemporary public–private partnership: Towards a global research agenda, *Financial Accounting &Management*, 34:3–16.

Hodge, G. and C. Greve (2005) (Eds.) *The challenge of public-private partnerships: learning from international experience*, Cheltenham; Northampton: Edward Elgar.

Hodge, G.A. (2004). Risks in PPP: Shifting, Sharing or Shirking?, *The Asia Pacific Journal of Public Administration*, 26(2):155-179.

Hodge, G.A. and C. Greve (2007). Public – Private Partnerships: An International Performance Review, *Public Administration Review, Essays on Service Delivery and Privatization:*545-558.

Hood, J., Fraser I., and N. McGarvey (2006). Transparency of Risk and Reward in U.K. Public–Private Partnerships, *Public Budgeting & Finance*.

Hsiao, W. C. (1994). "Marketization" – the illusory magic pill, *Health Economics*, 3:351-357.

IMF (2004), Public-private partnerships, Fiscal affairs department, International Monetary Fund, Washington, DC, www.imf.org/external/np/fad/2004/pifp/eng/031204.pdf. Accessed on May, 15, 2016.

Jackson, P.M. (2004) 'The Private Finance Initiative. From the foundations up-a premier', Hume Occasional Paper No.64. The David Hume Institute.

Jakovljevic M., Potapchik E., Popovich L., Barik D and T. E. Getzen (2016). Evolving Health Expenditure Landscape of the BRICS Nations and Projections to 2025, *Health Economics*, 26: 844–852.

Jeffares, S., H. Sullivan and T. Bovaird (2013). "Beyond the contract: The challenge of evaluating the performance(s) of PPPs", in Greve, C. and G. Hodge (Eds.), *Rethinking public-private partnerships: strategies for turbulent times*, London; New York: Routledge.

Jefferies M., Gajendran T. and G. Brewer (2014). Public Private Partnerships: The Provision of Healthcare Infrastructure in Australia, in S. D. Smith and D. D. Ahiaga-Dagbui (Eds.), *Proceedings 29th Annual ARCOM Conference,* Reading, UK: ARCOM.

Jefferies, M., McGeorge, D. and S.E Chen (2007). Risk Management in Public-Private Partnerships: Emerging Issues in Social Infrastructure. Building Across Borders, CIBW92 Procurement Systems, Hunter Valley, Australia, Sept 23-26, pp. 232-239.

Jesson, J., Matheson, L. and Lacey, F. (2011) Doing Your Literature Review: Traditional and Systematic Techniques. Sage, London.

Jutting, J. (1999). Public-private-partnership and social protection in developing countries: the case of the health sector, Paper presented at the ILO workshop on "The extension of social protection", Geneva.

Ke, Y.; Wang, S. and A. Chan (2010). Risk allocation in public-private partnership infrastructure projects: a comparative study, *Journal of infrastructure systems*, 16(4): 343-351.

Kensinger, J.W. and J.D. Martin (1988). Project Finance: Raising Money the Old-Fashioned Way, *Journal of Applied Corporate Finance*, 1.3: 69-81.

Khanom, N.A. (2010). Conceptual issues in defining public-private partnerships (PPPs), *International Review of Business Research Papers* 6(2):150-163.

Kivlenience, I. and B. V. Quelin (2012). Creating and capturing value in public-private ties: a private actor's perspective, *Creating and Capturing Value in Public-Private Ties*.

Kolesnikova, K. I. (n. d.). Public-private partnership: Foreign experience and prospects for Russia. Retrieved from http://www.vestnik.uapa.ru. Accessed on August, 17, 2018.

KS, J., Chowdhury A., Sharma K. and D. Platz (2016). PPP and the 2030 Agenda for Sustainable Development: fit for purpose?, Department of Economic & Social Affairs Working Paper No. 148 ST/ESA/2016/DWP/148.

Kurniawan, F., Mudjanarkoa, S.W. and S. Ogunlana (2015). Best practice for financial models of PPP projects, *Procedia Engineering*, 125:124 – 132.

Kwak, Y.H., Chih, Y-Y., C. W. Ibbs (2009). Towards a Comprehensive Understanding of Public Private Partnerships for Infrastructure Development, *California Management Review,* 51(2).

Lapsley, I. (2008). The NPM agenda: back to the future, *Financial Accountability and Management in Governments, Public services and Charities*, 24(1):77-96.

Leatherman S. and K. Sutherland (2005). *The Quest for Quality in the NHS: A chartbook on quality of care in the U.K*, Radcliffe Publishing, Oxford, Seattle: The Nuffield Truest.

Li, B., Akintoye, A., Edwards, P. and C. Hardcastle (2005). The allocation of risk in PPP/PFI construction projects in the UK, *International Journal Project Management*, 23 (1): 25–35.

Linder, S.H. (1999) Coming to terms with the public-private partnerships: a grammar of multiple meanings, *The American Behavioral Scientist*, 43(1): 35-51

Linder, S.H. and P.V. Rosenau (2002), "Mapping he terrain of the public-private policy partnership", in P.V.Rosenau (Eds.), *Public-private policy partnerships*, Cambridge, MA: MIT Press.

Lissauer, R. and P. Robinson (2001). *A Learning Process: Public Private Partnerships in Education*. London: Institute for Public Policy Research.

Liu, J., Love, E.D. P., Smith, J., Regan, M., Davis, R. P. (2014). Life cycle critical success factors for PPP infrastructure projects, *American Society of Civil Engineers*, 04014073-1.

Lobina, E. (2005). Problems with Private Water Concessions: A Review of Experiences and Analysis of Dynamics, *International Journal of Water Resources Development*, 21(1).

London, K.A. (1997). The Development of a Post Occupancy Evaluation Model Based on a Systems Approach. Unpublished Masters of Building Thesis, University of Newcastle, Australia.

Loosemore, M. and M.M.M. Teo (2000). Crisis Preparedness of Construction Companies, *Journal of Management in Engineering*, 16(5).

Marques, R. and S. Berg (2010). Risks, Contracts and Private Sector Participation in Infrastructure, *Journal of Construction Engineering and Management*, 137(11).

Maslova S. and M. Sokolov (2017). Risk Management in Public Private Partnership Projects in Health Care: Application of Current Approach and its Improvement, *Academy of Strategic Management Journal*, 16(4).

Maslova, S. (2015). The New Russian Law on PPP: Breakthrough or Throwback?, *European Procurement and Public Private Partnership Law Review*, 4:298-309.

Mason, R.O. and I.I. Mitroff (1981). *Challenging Strategic Planning Assumptions*. New York: Wiley.

Matayev, T. (2016). Public-Private Partnership in the Countries of the Eurasian Economic Union, *International Journal of Environmental & Science Education*, 11(16).

McConnel, A. (2010) *Understanding policy success: Rethinking public policy*, Basingstoke: Palgrave Macmillan.

Merna, T. and C. Njiry (2002). *Financing Infrastructure Projects*, Thomas Telford, London.

Montagu, D. and A. Harding (2012). A zebra or a painted horse? Are hospital PPPs infrastructure partnerships with stripes or a separate species? *World Hospitals and Health Services,* 48(2).

Moszoro M., Araya G., Ruiz-Nunez F. and J. Schwartz (2015) in Caselli, S., Corbetta, G., and V. Vecchi (Eds.) *Public private partnerships for infrastructure and business development: principles, practices, and perspectives*, New York: Palgrave Macmillan.

Mouraviev, N. (2012). What Drives the Employment of Public-Private Partnerships in Kazakhstan and Russia: Value for Money?, *Organizations and Markets in Emerging Economies,* 3(1),5.

Mouton, J. and H.C. Marais (1990). *Basics Concepts in the Methodology of the Social Sciences.*, South Africa: HSRC Publishers, Human Sciences Research Council

Nagy, P.J. (1979). *Country Risk: How to Asses, Qualify and Monitor It*, London: Euromoney.

Ng, A. and M. Loosemore (2007). Risk allocation in the private provision of public infrastructure, *International Journal of Project Management,* 25:66–76.

Nielsen, K. R. (1997). Design-Build & Co.: A brave new world. *Civil Engineering*, New York, 67(6): 58–61.

Nikolic, I.A. and H. Maikisch (2006). Public-Private Partnerships and Collaboration in the Health Sector: An Overview with Case Studies from Recent European Experience, Health, Nutrition and Population (HNP) Discussion Paper.

Nisar, T. (2007). Risk management in public-private partnership contracts, *Public Organization Review*, 7 (1): 1-19.

Nishtar, S. (2004). Public – private "partnerships" in health – a global call to action, *Health Research Policy and Systems*.

Norsa A. and D. Trabucco (2012). Il leasing in costruendo, una nuova opportunità per le opere pubbliche, Saggi/Essays, Firenze University Pres.

Nwangwu, G. (2016). *PPP in Nigeria: Managing Risks and Identifying Opportunities*, London: Palgrave Macmillan Ltd.

Nwangwu, G. (2016). United Nations Economic Commission for Europe (2008) *Guidebook on Promoting Good Governance in Public-Private Partnerships*, United Nations Publication, Sales No. 08.II.E.1.

OECD (2008) Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money. Paris: OECD.

OECD (2014). Overview of Public Governance of Public-Private Partnerships in the Russian Federation, OECD, May 2014.

OECD (2017). *Health at a Glance: OECD indicators*, OECD Publishing, Paris.

OECD (2018). FDI flows (indicator), doi: 10.1787/99f6e393-en. Accessed on 20 August 2018.

Officer, R.R. (2003). The respective roles of government and the private sector and private/public partnerships, Public Private Partnership Forum, The accounting foundation, The University of Sydney.

Öge, H. and T. Bas (2016). Public–Private Partnership Healthcare Projects in Turkey, *İşletme Bilimi Dergisi (JOBS)* 4(2): 105-119.

Osborne, S. (2000) *Public-Private Partnerships: Theory and Practice in International Perspective*, London; New York: Routledge.

Pankratov, A. (2010). *Public-private partnership in modern practice: main theoretical and practical problems* (in Russian). Moscow: Ankil.

Plavunov, N.F., Boyko, Yu.P. and I.G. Gal (2014). Healthcare system in the Russian Federation and prospects of its further development. *Electronic scientific journal "Social aspects of public health"*.

Pollock, A., Shaoul, J. and N. Vickers (2002). Private Finance and 'Value for Money' in NHS Hospitals: A Policy in Search of a Rationale?, *British Medical Journal*, 324(7347):1205–1209.

Pompella, M. (2006) *La finanza di progetto: profili tecnici e normative: I modelli, i contratti, i rischi, la valutazione degli investimenti e le possibili applicazioni*, Franco Angeli.

Pratap, K.V. and R. Chakrabarti (2017). *Public Private Partnerships in Infrastructure Managing the Challenge*, Springer, Singapore.

PricewaterhouseCoopers (PWC) (2005). Deliver*ing the PPP Promise – A Review of PPP Issues and Activity*, London: PricewaterhouseCoopers.

PricewaterhouseCoopers (PWC) (2010). *Build and Beyond: The (r)evolution of healthcare PPPs,* London: PricewaterhouseCoopers.

PricewaterhouseCoopers (PWC) (2012). World Overview of the PPP markets.

PricewaterhouseCoopers (PWC) (2018). PPPs in healthcare: Models, lessons and trends for the future, Healthcare public-private partnerships series, No. 4, London: PricewaterhouseCoopers.

Programme 2003/2004 University of Salford, School of Construction and Property Management, SCPM.

Rebeiz, K.S. (2012). Public–Private Partnership Risk Factors in Emerging Countries: BOOT Illustrative Case Study, *Journal of Management in Engineering*.

Revina, S.N., Dorofeeva, Y.A., Kalashnikova, E.B., Milova, I.E. and T.A. Kalentyeva (2017). "Public-Private Partnership in Modern Russia: Models, Targets and Realization", in Popkova G. (eds.), *Russia and the European Union Development and Perspectives*, Springer.

Reznichenko, I.V. (2010) Models of Public-Private Partnerships (in Russian), Saint Petersburg Vestnik, Management series, 4:58-83, http:://www.vestnikmanagemnt.spbu.ru/ archive/ pdf/486.pdf. Accessed on August 20, 2018.

Robert, O.K. and A. P. C. Chan (2017). Stakeholders' Perspectives on the Success Criteria for Public-Private Partnership Projects, *International Journal of Strategic Property Management*, 22(2).

Roehrich, K.J., Lewis, M.A. and G. George (2014). Are public -private partnerships a healthy option? A systematic literature review, *Social Science & Medicine*, 113: 110 – 119.

Rondinelli, D. (2002). "Public-private partnerships", in Kirkpatrick, R. Clarke and C. Polidano (Eds.) *Handbook on development policy and management*, Cheltenham: Edward Elgar.

Rossi, M. and R. Civitillo (2014). Public Private Partnerships: a general overview in Italy, *Procedia - Social and Behavioral Sciences*, 109: 140 – 149.

Rothballer C. and P. Gerbert (2015) Preparing and Structuring Bankable PPP Projects. In: Caselli S., Corbetta G., Vecchi V. (Eds*.), Public Private Partnerships for Infrastructure and Business Development*. New York: Palgrave Macmillan.

Roumboutsos, A. and K. P. Anagnostopoulos (2008). Public–private partnership projects in Greece: risk ranking and preferred risk allocation, *Journal Construction Management and Economics*, 26 (7).

Rozenfeld, B. A. (1996). The Crisis of Russian Health Care and Attempts at Reform, in RAND conference proceedings. Russia's demographic "crisis", in DaVanzo J. and G. Farnsworth (Eds.), Santa Monica, California, RAND Center for Russian and Eurasian Studies, 163-74.

Sadka, E. (2007). Public-Private Partnerships: A Public Economics Perspective, IMF Working Paper.

Savas, E.S. (2000) *Privatization and public-private partnerships*, New-York: Chatham House Publishers, Seven Bridges Press

Schäferhoff, M., Campe, S. and C. Kaan (2009). Transnational Public-Private Partnerships in International Relations: Making Sense of Concepts, Research Frameworks, and Results, *International Studies Review*, 11:451-474.

Schwartz, G., A. Corbacho and K. Funke (2008). *Public investment and public-private partnerships: Addressing infrastructure challenges and managing fiscal risks*, New York: Palgrave Macmillan.

Semashko, N.A. (1934). *Health Protection in the USSR,* Victor Gollancz: London.

Shabashevich, M. (2011). Effectiveness of the implementation of infrastructure projects of PPP in Russia, KPMG.

Shen, L.Y., Platten, A. and X.P. Deng (2006). Role of public private partnerships to manage risks in public sector projects in Hong Kong, *International Journal of Project Management*, 24: 587-594.

Shukla, N., Panchal, R. and N. Shah (2014). Built-Own-Lease-Transfer (BOLT): A Public Private Partnership Model that Bridges Gap of Infrastructure in Urban Areas*, International Journal of Civil Engineering Research,* 5(2): 35-144.

Singh, L.B. and S.N. Kalidindi (2006). Traffic Revenue Risk Management Through Annuity Model of PPP Road Projects in India, *International Journal of Project Management*, 24(7):605-613.

Smith A. (2003). ‘‘Public–Private Partnerships in the USA: Risks and Opportunities,’’ in *Public Private Partnerships: Managing Risks and Opportunities*, eds. Akintoye A., Beck M. and C. Hardcastle, Oxford: Blackwell Science.

Smith, N.J. (1999). *Managing Risk in Construction Projects*, Blackwell Science, Oxford.

Smyth, P. and M. Wearing (2002). "After the welfare state? Welfare governance and the communitarian revival", in S. Bell (Eds.), *Economic governance and institutional dynamics*, Oxford: Oxford University Press.

Stadtler, L. (2016). Scrutinizing public-private partnerships for development: Towards a broad evaluation conception, *Journal of Business Ethics*, 135(1):71-86.

Storozheva, L. (2016). The procurement stage of the Public-Private-Partnership projects in healthcare as the source of project's critical success factors, Master Thesis, St. Petersburg University Graduate School of Management.

Teisman, G.R. and E.H. Klijn (2002), Partnership arrangements. Governmental rhetoric or governance scheme?, *Public Administration Review*, 62(2):197-205.

Terry, F. (1996). The Private Finance Initiative – Overdue Reform or Policy Breakthrough, *Journal, Public Money & Management,* 16 (1).

The EIB's role in Public-Private Partnerships (PPP), European Investment Bank, (2004).

Thomas, P., Bickel, J.I and R. B. Bratvold (2013). The Risk of Using Risk Matrices, *SPE Economics and Management.*

Thomson, A. (1998). Recognizing research processes in research based literature, in (Eds) Crookes, P. and Davies, S., *Research into practice,* Balliere-Tindall, Edinburgh.

Torchia, M., and A. Calabrò (2018). Increasing the Governance Standards of Public-Private Partnerships in Healthcare: Evidence from Italy*, Public Organization Review,* 18:93–110.

Torchia, M., Calabrò, A. and M. Morner (2015). Public–Private Partnerships in The Health Care Sector: A systematic review of the literature, *Public Organization Review*, 17 (2):236–261.

Trofimova, E.V. (2016). Development of Public-Private Partnership in Russia: Analysis of Regional Features, Master Thesis Faculty of St. Petersburg School of Social and Human Sciences, Department of Public Administration.

Tuohy, C. H., Flood, C.M. and M. Stabile (2004), How Does Private Finance Affect Public Care Systems? Marshalling Evidence from OECD, *Journal of Health Politics, Policy and Law,* University of Toronto, 29(3):359-396.

UNECE (2008). Guidebook on Promoting Good Governance in PPP, UN, New York and Geneva, ECE/CECI/4.

UNECE (2008). *Guidebook on Promoting Good Governance in Public-Private Partnership*. United Nations Economic Commission for Europe.

Urio, P. (2010), *Public-private partnerships: Success and Failure Factors for in-transition countries*, University Press of America, Inc.

Valiullin, H. and E. Shakirova (2004). Regional Foreign Investments in Russia and China, *Journal of Estimation Problems*, 5:101-113.

Varnavskiy, V., Klimenko, A., & Korolev, V. (2010). *Public-private partnerships: theory and practice* (in Russian), Moscow: Publishing House of the State University – Higher School of Economics.

Vecchi, V. (n.d.). Il partenariato pubblico privato per le operazioni di investimento sanitario: dal project financing al project leasing, SDA Bocconi.

Vecchi, V. (2008*). Il project finance per gli investimenti pubblici: profili di convenienza e sostenibilità e applicazioni al settore sanitario,* Egea.

Vecchi, V. (2013). (Eds.), Studio per l'ASL dell'Aquila sulla fattibilità economico-finanziaria per la realizzazione di investimenti sanitari in PPP, Milano.

Vecchi, V. and M. Hellowell (2013). Leasing by public authorities in Italy: creating economic value from a balance sheet illusion, Public Money & Management, 33 (1): 63-70.

Vecchi V. and V. Leone (2016). *Partnership Pubblico Privato*, Egea

Vecchi, V., Hellowell, M. and F. Longo (2010). Are Italian healthcare organizations paying too much for their public-private partnerships?, *Public Money & Management*, 30(2): 125 — 132.

Vecchi, V., S. Caselli and G. Corbetta (2015) "The public private partnerships' framework" in Caselli S.,G. Corbetta and V. Vecchi (Eds.), *Public private partnerships for infrastructure and business development*, Ney York: Palgrave Macmillan.

Visconti, R. M. (2013). Managing healthcare project financing investments: a corporate finance perspective, *Journal of Investment and Management,* 2(1): 10-22

Wall, A. and C. Connolly (2009). The Private Finance Initiative, *Public Management Review*,11 (5): 707 – 724.

Wang, S. Q. and R. L. K. Tiong (2000). Case study of government initiatives for PRC's BOT power plant project, *International Journal of Project Management*, 18(1):69–78.

Wang, S. Q., Tiong, L. K., Ting, S. K., Chew, D., and D. Ashley (1998). Evaluation and competitive tendering of BOT power plant project in China, *Journal of Construction Engineering and Management,* 124(4): 333–341.

Wibowo, A. and H.W. Alfen (2015). Government-led critical success factors in PPP infrastructure development, *Built Environment Project and Asset Management*, 5(1):121-134.

Williamson, O.E. (1979). Transaction-Cost Economics: The Governance of Contractual Relations, *Journal of Law and Economics*, 22(2): 233-261.

Woodward D.G. (1995). Use of sensitivity analysis in build-own-operate-transfer project evaluation, *International Journal of Project Management*, 13(4):239-246.

World Bank Group, Public-Private-Partnership In Infrastructure Resource Center, http://ppp.worldbank.org/public-private-partnership/financing#further. Accessed on February, 2, 2016.

World Economic Forum (2015), The Global Competitiveness Report 2015–2016, Geneva.

World Health Organization (2018). New Perspectives on Global Health Spending for Universal Health Coverage, WHO/HIS/HGF/HF Working Paper.

Yang Y., Hou H. and Y. Wang (2013). On the Development of Public–Private Partnerships in Transitional Economies: An Explanatory Framework, *Public Administration Review*, 73(2):301–310.

Yescombe, E. R. (2002) *Principles of project finance*, London: Academic Press.

Yescombe, E. R. (2007*) Public-private partnerships: principles of policy and finance*, Burlington; Kidlington: Elsevier.

Yin, R. K. (2003). *Case study research: design and methods (3rd ed.),* Thousand Oaks, CA: Sage.

Yong, H. K. (2010) *Public-private partnerships policy and practice: A reference guide*. London: Commonwealth Secretariat.

Yu Y; Chan A.P.C; Chen C. and A. Darko (2018). Critical Risk Factors of Public–Private Partnership Projects: Literature Review, *Journal of Infrastructure Systems*, 24(1): 04017042.

Zimin, V. (2013). Regional Investment Climate of the Russian Federation, Basic Indicators. *Journal of Social Development Theory and Application*, 5:296-298.

Annex 1 Table 1 "Between public and private"

PPP Infrastructure (in)/appropriatness (A)	PPP Advantages (B)	PPP weaknesses/Reasons for PPP failure (C)	Political-economical reasons for the government involvement in PPP (D)
1) highways are "especially suitable for PPP"	1)High maintenance standards	1) High contracting costs	1) "achieving better value for money, or improved services for the same amount of money" (p.346).
2) schools and hospitals are not very adapt for PPP	2)Less possibilities for opportunistic renegotiations	2) Opportunistic renegotiations	2) electoral benefits
3) power stations work better under privatization	3) Less pressure to lower user fees and consequently more revenue from the project	3) The use of PPPs to circumvent budgetary controls	3) possibility to reduce tax
4) information technology field is less adapt for PPP	4) Absence of general revenue tax and government bureaucracy costs distortion	4) The possibility to record the PPP investment off the balance sheet – "False PPP advantage"	4) greater efficiency of private sector
5) transition countries- PPP	5)Relieving governent budget	5) PPP failure:	5)business community approval
6) electricity generation and telecommunications - privatization	6) Presence of competitive market rules	a) poor incentives	6) potential neo-liberal advice for the government
7) water supply and electricity transmission & distribution – concessions	7) Charging appropriate user fees (price efficiency)	b)defective accounting standards	7) Service delivery improvement i.e. creating maximum value for money
8)transport projects – BOTs (PPP)	8) Filtering "white elephants"	c)inadequate governance	8) Overall efficiency in the realization of the project
9) Economic VS Social	9) Positive income distribution	6) PPP intrinsic complexity and high cost (especially for the small projects)	9) The government's limited resources
10) PPP's major application in infrastructural projects and in solving urban problems	10) Important efficiency gains (coming also from bundling advantage)	7) PPP requirements quite often exceed the public sector's capacities to manage or implement the project.	10) The need for new infrastructure and the replacement of old
11) IT service delivery is inappropriate for PPP	11) Integration feature, a.k.a. bundling=>:	8) Higher private sector borrowing costs	11) Fiscal rules requiring the reduction of debt
12) Joint ventures & concessions (PPP) are appropriate for infrastructure provision	a) focus on the whole-of-life cycle of the project	9) Higher transaction costs of PPPs	12) A public that does not accept privatization
13) Service contracts & leasing are less desirable for infrastructure provision	b) cost and funding predictability	10) corruption (discretionality of political decisions)	13) A shift toward philosophy of service delivery instead of asset acquisition
	c) "highly effective operational phase"	11) PPP failure:	14) Progress of PPP in other parts of the world
	12) The private sector's "can-do-mentality" lesson for the public sector:	a)Project life-cycle related issues	15)Efficiency, 16)Effectiveness
	a) innovation abilities	b) "enabling environment"	17) Too big considerable sunk costs for the private sector to undertake it alone
	b) effective use of public funds	c) "inadequate project preparation"	18) (6 ways the PPP can change the public sector):

	c) responsibility shift	12) Long-term nature	1) management reform 2) encouragement of the so called “problem conversion”
	13)“potential efficiency gains" 14) better VfM 15) tapping the private sector’s financial resources 16) effective and efficient infrastructure delivery on a whole-life cycle cost basis 17) Effective risk allocation 18) Greater time-and cost-certainty 19) Bundling & ownership structure =>: a)Substantial efficiency improvements b) Better governance quality 20) Positive public policy outcomes: a) combating social exclusion b) reforming local public services c) improving the policy making process d) creation and maintenance of the "civil society"	13) Inflexibility 14) High premiums for risk bearing 15) high contract price 16) PPP’s misuse to defer the perception of expenses 17) Lack of transparency of contracts and public spending 18) Little accountability to society and stakeholders 19) The emerging trade-off situation (e.g. economic efficiency over social equity)	3)”moral regeneration” produced by PPPs 4)financial risk shift 5)public service restructuring 6) improvement of business-government relations 7) give-and-take between partners

Sources:

A) 1 - 3 Engel, Fischer, Galetovic (2014); 4 - 8 Grimsey and Lewis (2007); 9 Schwartz, Corbacho, and Funke (2008); 10 Teisman and Klijn (in ed. by Hodge and Greve, 2005); 11 OECD book (2008); 12 - 13 Dewulf, Blanken and Bult-Spiering (2012);

B) 1 - 10 Engel, Fischer, Galetovic (2014); 11 - 12 Grimsey and Lewis (2007); 13-14 Schwartz, Corbacho, and Funke (2008); 15-16 Rothballer and Gerbert (in ed. by Caselli, Corbetta,Vecchi, 2015); 17-19 Hellowel (in ed. by Caselli, Corbetta, and Vecchi, 2015); 20 Osborne (2000).

C) 1 - 5 Engel, Fischer, Galetovic (2014); 6 - 7 Grimsey and Lewis (2007); 8-9 Schwartz, Corbacho, and Funke (2008); 10 Coghil and Woodward (in Hodge and Greve, 2005); 11 Rothballer and Gerbert (in ed. by Caselli, Corbetta, Vecchi, 2015); 12-14 OECD book (2008); 15-16 Hellowel (in ed. by Caselli, Corbetta, and Vecchi, 2015); 17-19 Urio (2010);

D) 1 Grimsey and Lewis (2005); 2-6 Coghil and Woodward (in Hodge and Greve, 2005); 7-14 OECD book (2008); 15-17 IMF (2004:4); 18 Linder and Rosenau (2000) (in Grimsey and Lewis, 2007)

Annex 2 Table 2 "PPP distinctive features"

Key elements (a)	Success factors (b)	Risks classification (c)
1) a long-term contract between a public-sector and private-sector parties	1) commitment	1) Risk (measurable risk)VS Uncertainty (immeasurable risk)
2) private-sector's responsibility for the design, construction, financing and operation of public infrastructure	2) trust	2) Exogenous VS Endogenous risk
3) the private-sector party receives payments over the life of the PPP contract for the use of the Facility either from the public-sector party or from the general public as users of the Facility	3) working on common objectives	3) Demand VS Supply risk
4) the Facility remains in public-sector ownership, or is reverted to public-sector ownership at the end of the PPP contract	4) team building	4) Commercial VS Political VS Legal risks Commercial: Supply VS Demand. Supply: construction + supply-side operation risks = availability risk, costs of input and labour, technical and production process risk, technological redundancy risk, residual value risk, financial market risk. Demand: mainly demand-side operation risk.
5) specific nature of the service usually delivered by the government through PPP contract	5) shared risk	5) Endogenous (e.g. construction, operation, maintenance) to be transferred to the concessionaire + some nonspecific government induced risk (e.g. devaluation) VS Exogenous (demand risk) – to the government or society
6) possibility of generating extra profits or additional returns (collaborative advantage/surplus value)	6)conflict resolution through openness and problem solving	6) Availability risk to be shifted to the private partner
7) PPP's flexibility	7) cooperative approach at each stage	7) 2 types of demand risk: I. R. of a probable project failure; II. R. of inability to repay the debt due to some adverse market conditions.
8)integrated public project procurement	8) political commitment	8) Political risk; Legal and Regulatory risk; Completion risk; Performance risk; Operation risk; Financing risk; Currency risk; Offtake risk; Environmental and Social risks;
9) focus of the public sector on the services to be delivered, not on the asset	9) good governance	9) a) Global risks b) Elementary risks:
10)clear specification of the services to be delivered, but not the method of delivering	10) absence of pervasive corruption	- political risks
11)consideration of alternative methods to ensure the best procurement solution for a particular project	11) robust and clear legal framework	- borrower's credit risks
12)risk bearing by the party best able to shoulder it	12) developed institutional setup	- sponsor's credit risk
13)risk transfer made possible by integrating finance in the agreement	13)contractibility of the quality of provided services	- sovereign risk
14)remuneration schedules based on the output quality and quantity, rather than the asset delivery	14) mutual trust between government officials and private sector entities	- project risks: a) completion risk; b) operation and maintenance risk; c) input and output risks; d) financing risk
15) a very simple incentive-centered theory	15) public confidence in the integrity of the partnerships	10) The prominence of institutional and sovereign risks for the developing countries
16) considerable number of various agents	16) 8 PMCSFs for Initiation & planning phase (e.g. sound feasibility analysis)	

17) large number of contracts (regulating relationships between them) PPP for development only:	17) 6 PMCSFs for Procurement phase (e.g. efficient procedure for financial close)	
18) appropriate institutional setup, formal laws and regulations, property rights protection, mature financial market (as preconditions necessary for PPP to exist) Presence and addressing of a "societal concern" issue 19)Close interaction with civil society for resolving the societal concern 20)Underprivileged community group's interests are addressed 21)Provision of services "through existing public institutions" 22) appropriate knowledge, or, expertise, the right incentives, attentive supervision and scrutiny of PPP (as preconditions necessary for PPP to exist)	18) 10 PMCSFs for Partnership phase (e.g. good governance) 19) much work & huge efforts 20) overcoming numerous institutional obstacles 21) "attractive content"/interesting solution 22) intensive interactions and involving third parties 23) "gearing ambitions and management to each other" 25)well-organized process management 26) PPP whole-life best practice framework guranteeing success achievement (considering 3 project phases) 27) Legitimacy 28) Sustainability 29) Innovation	

Sources:

A) 1-4 Yescombe (2007); 5 OECD book (2008); 6 Teisman and Klijn (in ed. by Hodge and Greve, 2005); 7-15 Grimsey and Lewis (2007); 16-17 Engel, Fischer and Galetovic (2009); 18 Fischer and Galetovic (2014); 19-21 Stadtler (2015); 22 Hellowel (in ed. by Caselli, Corbetta, Vecchi, 2015)

B) 1-7 Grimsey and Lewis (2007); 8-13 Schwartz, G., Corbacho, A., Funke, K. (2008); 14-15 Rondinelli (2002); 16-18 Liu, Love, Smith, Regan, Davis (2014); 19 – 25 Klijn and Teisman (in ed.by Hodge and Greve, 2005); 26 Rothballer and Gerbert (in ed. by Caselli, Corbetta, Vecchi, 2015); 27-29 McConnell

C) 1-4 OECD book (2008); 5-7 Engel, Fischer and Galetovic (2009); 8 Delmon (2011); 9 Merna and Smith (1996) (in OECD book (2008); 10 Grimsey and Lewis (2007);

Annex 3 Table 3 “Project finance principles”

Basic features of Project Finance	Key actors in PPP	A variety of risks	A variety of contractual arrangements
1) Non-recourse or limited recourse funding; 2) Special Purpose Vehicle (SPV) 3) Off-balance sheet transaction; 4) Sound income stream of the project as the predominant basis for financing 5) A variety of financial instruments: Debt, Eqity & Mezzanine; 6) A variety of participants: a) private participants, b)Government, c)Foeign governments, d)Multilateral agencies (the World Bank, the International Finance Corportaion, the Asian Development Bank, etc)	I. Grantor II. Project company III. Lenders IV. Multilateral agencies/Bilateral agencies/Export Credit Agencies V. Offtake purchaser VI. Input supplier VII. Construction contractor VIII. Opertaor	1) Political risk 2) Legal and regulatory risk 3) Completion risk 4) Performance risk 5) Operation risk 6) Financing risk 7) Currency risk 8) Offtake risk 9) Environmental and social risks	1) Concession agreement (a.k.a implementation agreement) 2) Offtake purchase agreement 3) Input supply agreement 4) Construction contract 5) Operation and maintenance (O & M) agreement 6) Lending agreements 7) Hedging arrangements 8) Intercreditor arrangements 9) Insurance arrangements 10) Guarantee and credit enhancement arrangements 11) Sponsor (shareholder) support 12) Shareholding arrangements

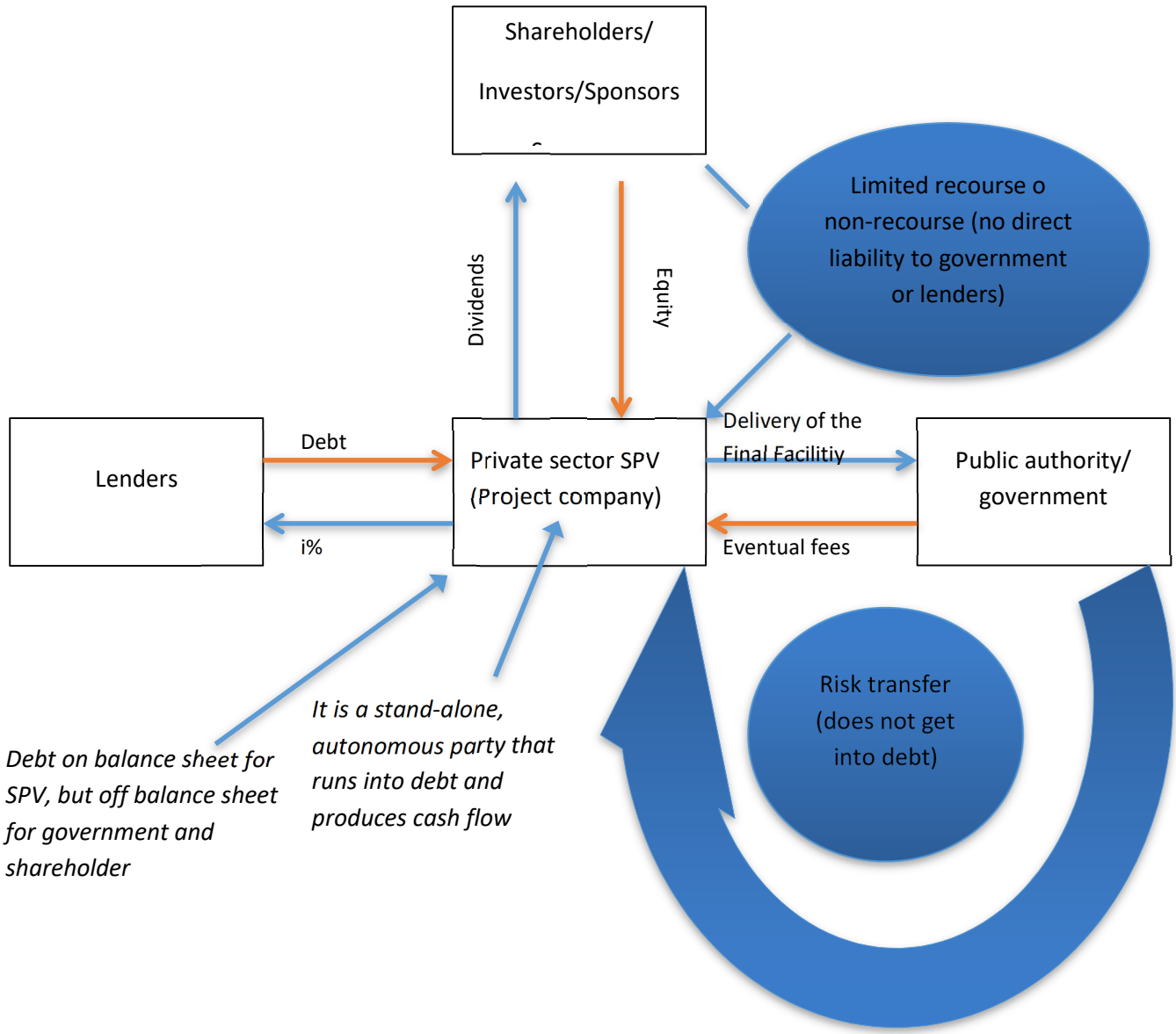
Sources:

1) World Bank Group document on PPP.

2) Merna and Njiru, 2002.

3) Delmon, 2011.

Annex 4 Scheme 1 "Project finance: the structure and key characteristics"

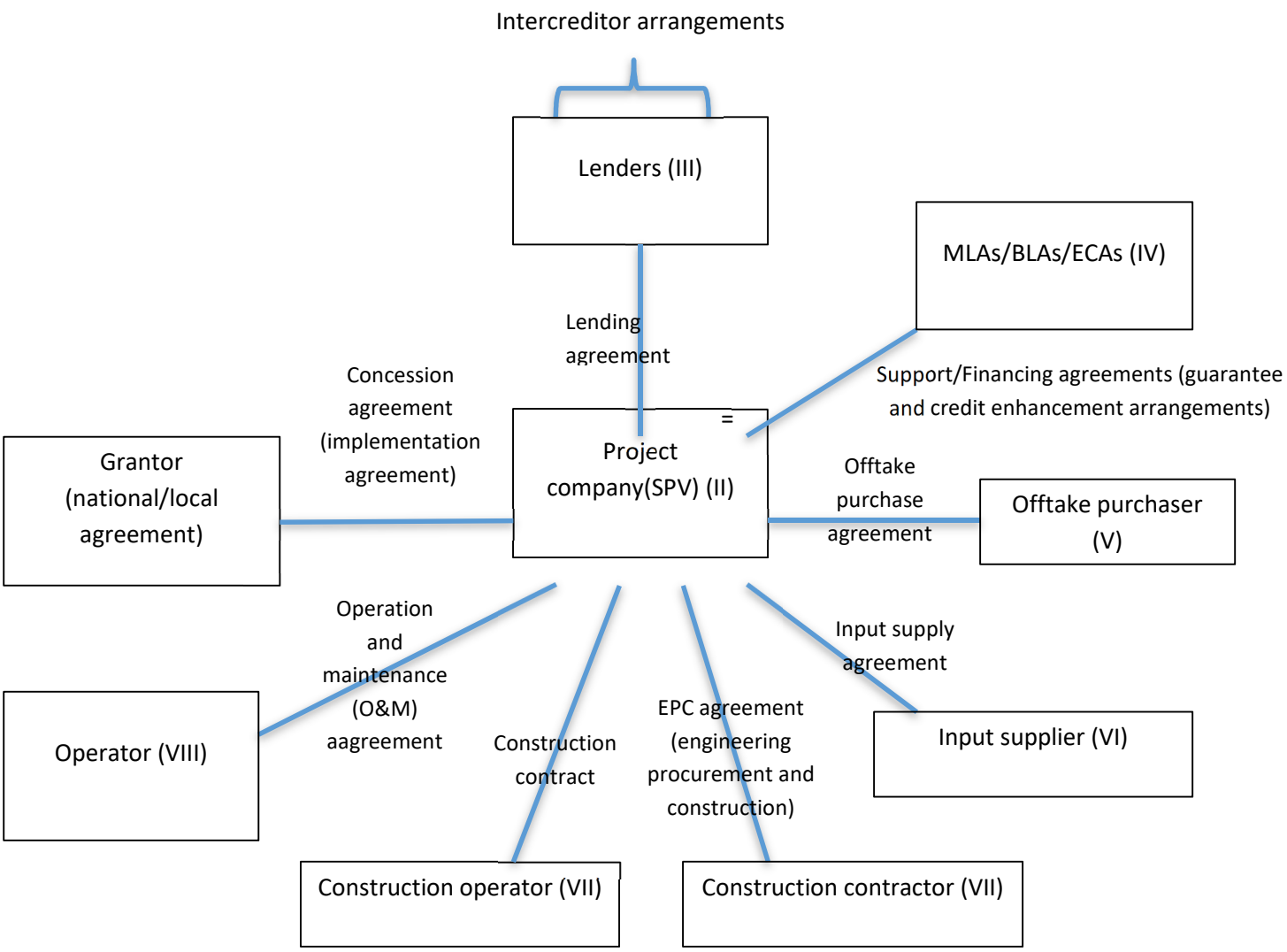


Advantages of the SPV (Project Finance) usage:

- PF usefulness in raising long-term financing for important projects
- the increased expected return on equity, despite higher financing costs as compared to the government debt/public finance (mainly due to the high levels of leverage and relative simplicity in raising debt capital as compared to raising equity, especially in projects with no history)
- the only guarantee provided by sponsors is the right to the future project's cash flow
- reduced possibility of contaminating a healthy company in case the larger project faces the problems (thanks to isolating the project within SPV)

Sources: Grimsey and Lewis, 2007.

Annex 5 Scheme 2 “PPP typical structure”



Annex 6 "PPP Glossary"

Affordability – is about whether or not a project falls within the intertemporal budget constraint of the government. If it does not, then the project is unaffordable (OECD, 2008).
Availability contract – the contract in which user fees (if they exist) only pay for operation and maintenance, and for capital costs (Engel, Fischer, Galetovic, 2014).
Availability payments –is a payment for performance (irrespective of demand) (Doicha and Parker, 2009). Availability payments pay for the upfront investment, and the concessionaire makes a normal profit on this investment regardless of demand realizations (Engel, Fischer, Galetovic, 2014)
Availability risk - the risk connected with the operational phase, i.e. the capacity of the private party to offer the service corresponding to the standards agreed upon in the contract (Engel, Fischer and Galetovic, 2014).Availability risk covers situations where, during the PPP's operational phase, an underperformance linked to the state of the PPP assets results in services being partially or wholly unavailable, or where these services fail to meet the quality standards specified in the PPP contract (EIB).
Brownfield – investments in infrastructure projects that have already completed their construction phase (Della Croce and Gatti in ed. by Caselli, Corbetta and Vecchi, 2015)
Bundling – the distinctive feature of the PPP consisting in tying of design, finance, construction, operation and maintenance into one contract and making one party responsible for all these activities (Grimsey and Lewis, 2007). It means to tie together different tasks, in particular investment-related and operation-related ones (Greco, 2003).
Cold (or warm) works – projects only partially covered by user's tariffs, thus requiring tariff integration; "works where social function is absolutely prominent and for this reason the prices for their use must be so low that they cannot be considered sufficient to give a satisfactory profit to sponsors (for example hospital building and their services) (Project financing draft report, Annex N8, 2007)
Earmarking - consists of funds (or capital) that are set aside to pay for a specific project or event. In some cases, the term is also synonymous with the word "flagged", or "marked", especially when used in certain congressional settings. (http://www.investopedia.com/terms/e/earmarking.asp#ixzz4CbjY1DH4).
Economic infrastructure – is the type of public infrastructure that is considered essential for day-to-day economic activity (transportation facilities and utility networks – for water, sewage, electricity) (Yescombe, 2007).
Greenfield – projects fully exposed to construction risk (Della Croce and Gatti in ed. by Caselli, Corbetta and Vecchi, 2015)
Hard infrastructure – the one that involves provision of buildings or other physical facilities (Yescombe, 2007).
Hot works – projects where the user's fees suffice to cover all the costs; "works that can give a satisfactory (from an economic point of view) profit, so that they can be rightly defined self-liquidating (for example energy production plants, highways with a payment, car parking, recreation grounds)" (Project financing draft report, Annex N8, 2007).
Institutional risk – the risk involved by unstable and incomplete laws and regulations,
what obviously presents danger for PPP implementation, the risk that is especially important for transition countries(Grimsey and Lewis, 2007).

Pork barrel - is a metaphor for the appropriation of government spending for localized projects secured solely or primarily to bring money to a representative's district. Pork-barrel politics describes a process that legislators use to obtain funding from a central government to finance projects benefiting the legislators' local constituents. The benefits of such projects typically do not extend beyond a legislator's constituency, despite the fact that funding was obtained through taxation of the larger geographic region (http://www.investopedia.com/terms/p/pork_barrel_politics.asp#ixzz4CbhprWDC).

Project bonds - bonds that are issued by the SPV and sold to either banks or, more frequently, to other bond investors (Della Croce and Gatti in ed. by Caselli, Corbetta and Vecchi, 2015).

Project finance – a method of raising long-term debt financing for major projects through "financial engineering", based on lending against the cashflow generated by the project alone; it depends on a detailed evaluation of a project's construction, operating and revenue risks, and their allocation between investors, lenders, and other parties through contractual and other arrangements (Yescombe, 2002).

Public sector comparator – is a benchmark project plan that represents a hypothetical exposition of a project should that project be undertaken through traditional procurement (OECD, 2008).

Regulatory capture - the process through which special interests affect state intervention in any of its forms, which can include areas as diverse as the setting of taxes, the choice of foreign or monetary policy or the legislation affecting R & D. (Dal Bò, 2006).

Regulatory taking - an appropriation or diminution of private property rights by a governmental regulation which exceeds the government's legitimate police power (as the power to enact safety regulations) and for which the owner may seek a writ of mandamus, declaratory relief, or just compensation (http://dictionary.findlaw.com/definition/regulatory-taking.html).

Social infrastructure – is the type of public infrastructure that is considered essential for the structure of society (schools, hospitals, libraries, prisons) (Yescombe, 2007).

Soft infrastructure – the one that involves the provision of services (street cleaning, social services, education and training) (Yescombe, 2007).

Sovereign risk – is the risk that a foreign central bank will alter its foreign exchange regulations, significantly reducing or completely nullifying the value of its foreign exchange contracts. It also includes the risk that a foreign nation will either fail to meet debt repayments or not honor sovereign debt payments (http://www.investopedia.com/terms/s/sovereignrisk.asp#ixzz4CtDn3vF2).

Value for money - is the optimal combination of quality, features and prices, calculated over the whole of the project's life. Higher VfM is mainly obtained through risk transfer, competition and the use of private sector management skills. (OECD, 2008).

"White elephants" - are the projects that have negative social value or that are overengineeered (Engel, Fischer, Galetovic, 2014)

Annex 7 "PPP definitions glossary"

I. Definitions given by the authoritative institutions

The European Investment Bank (EIB) uses "a generic term" of PPP to refer to "the relationships formed between private sector and public bodies often with the aim of introducing private sector resources and/or expertise in order to help to provide and deliver public sector assets and services" (EIB, 2004, p.2).

The Public Private Infrastructure Advisory Facility (PPIAF) defines PPP as involvement of "the private sector in aspect of the provision of infrastructure assets or of new or existing infrastructure services that have been traditionally provided by the government" (PPIAF, "What are PPP", https://pppknowledgelab.org/ppp-cycle/what-ppp).

The OECD definition adds up to "an agreement between the government and one or more private partners according to which the private partners deliver the service in such a manner that the service delivery objectives of the government are aligned with the profit objectives of the private partners and where the effectiveness of the alignment depends on a sufficient transfer of risk to the private partners" (The OECD book, 2008, p.17).

Whereas there is no common definition for PPP at the European Community level, European Commission uses this term to refer to "forms of cooperation between public authorities and the world of business which aim to ensure the funding, construction, renovation, management and maintenance of an infrastructure of the provision of a service" (EC, 2004, p.3).

Finally, HM Treasury, UK (being the absolute leader in PPP application, PFI to be more exact) describes PPP as "arrangements typified by joint working between the public and private sector", specifying that "where delivery of public services involves private sector investment in infrastructure, the most common form of PPP is the Private Finance Initiative (PFI)"(Urio, 2010, p.25).

II. Definitions given by the academicians and PPP researches

PPP is "an agreement by which the government contracts a private company to build or improve infrastructure works and to subsequently maintain and operate them for an extended period in exchange for a stream of revenues during the life of the contract"(Engel et al., 2014, p.2).

PPPs are "binding contractual agreements through which a government buys a final product or service from a private provider" (P.Urio, 2010, p.72).

PPP is "a long-term method of cooperation between public and private actors, where PPPs/PPPs deliver infrastructure or services to the public at large, to specific categories of users, or to a public authority". He also defines it as "means of allocating resources among various categories of individuals" (Yseult, 2014, p.152).

PPP is a "collaborative arrangements between actors from the public and business sectors that address a societal concern in close interaction with civil society by jointly providing public goods and services to an underprivileged community group through existing public institutions" (Stadtler, 2016, p.73).

PPP is "a means to finance and deliver demanded services, qualitatively different from private and public, and superior to either one alone" (Linder and Rosenau, 2000, p.58).

PPP is "a method of producing and delivering public services that brings together the public and private sectors in a long-term contractual relationship in which each retains its own identity and set of responsibilities" (Grimsey et al., 2007, p.58).

PPP in its larger sense “considers not only arrangements to deliver services and infrastructure but also the interactions aimed at building more favorable context for business” (Vecchi et al, 2015, p.2).

PPP is not only the “cost-efficient and effective mechanism for the implementation of public policy across a range of policy agendas”, but also a mechanism that promotes and brings benefits to the development of “socially inclusive communities” (Osborne, 2000, p.1).

Annex 8 "PPP types"

Based on the legal nature of private sector involvement or activities of the private sector responsibility:

BOM	Build-own-maintain
BOO	Build-own-operate
BDO	Build-develop-operate
DCMF	Design-construct-manage-finance
DBO	Design-build-operate
DBFO	Design-build-finance-operate
BBO	Buy-build-operate
LOO(LDO)	Lease-own-operate (Lease-develop-operate)
WAA	Wrap-around addition
BOT	Build-operate-transfer
BOOT	Build-own-operate-transfer
BROT	Build-rent-own-transfer
BLOT	Build-lease-operate-transfer
BTO	Build-transfer-operate

Sources: OECD, 2008; Yescombe, 2007.

Annex 9 “Pulkovo airport and Western High Speed Diameter PPP Projects brief facts”

The reconstruction and development of Pulkovo airport is a unique project not only for St. Petersburg, but for the whole Russian Federation. Northern Capital Gateway, an international consortium, is the example of foreign investment in PPP in Russia. The Northern Capital Gateway, consisting of the Russian bank VTB Capital (57,5%), international airport operator Fraport AG Company (35,5) and Greek investment group Copelouzos (7%) manages the Pulkovo airport from April 2010. It is also an example of the first successful PPP project implemented in Russia. The specially created consortium Northern Capital Gateway “ensured the on time and within budget implementation of the project, thus confirming the effectiveness of public-private partnership as a form of cooperation between government and business”. The airport management company, Northern Capital Gateway, received an award “Investor of the year” from the government of St. Petersburg. This project was considered the best investment project in the sphere of city’s transport infrastructure. According to the rating of the International Council of Airports (Airport Council International, ACI), Pulkovo Airport is one of the five best airports in Europe for passenger service quality in 2015. In 2012, in the second issue of the publication "Infrastructure 100: World Cities Edition ", published by KPMG, Pulkovo Airport was mentioned as one of the hundreds of the world`s highly innovative infrastructure projects that contributes to the creation of favorable urban environment and sustainable urban development.

Another example of successful implementation of a PPP project in Russia is the Western High Speed Diameter project - the Russian first project of the urban toll road, with capital investments of $4.9bn. The construction of the Western High-Speed Diameter highway is carried out also basing on the Law of St. Petersburg "On the participation of St. Petersburg in public-private partnerships". The participants of the Consortium are VTB Capital, Gazprombank, Astaldi (Italy), Içtaş Inşaat (Turkey) as construction contractors and Mega Yapi Inşsaat ve Ticaret (Turkey) – as technical consultant for contractors. Leading financial institutions - VTB Capital, Gazprombank, European Bank, Eurasion Development Bank and Development Bank provided financing for the project construction. At the moment (2016), the PPP project for the construction and operation of the WHSD motorway is the largest PPP transaction in the field of road construction in the world. It became the winner of various awards: "The Deal of the Year in the European Road Sector in 2012", "The Deal of the Year in the European toll road sector in 2012", "The Best Urban Development Project in Europe”, "PPP transaction of the year in Europe ", and “The Best Project of the Year". In fact, the significance of Western Speed Diameter highway is difficult to overestimate and not only for the city of St. Petersburg but for the whole Russian Federation.

Annex 10 “Case study risk matrix”

RISK	DESCRIPTION	ALLOCATION		
		PRIVATE	PUBLIC	MIXED
RISKS INHERENT TO THE SITE				
Environmental risk	Risk of contamination of the site during the construction period, with consequent increase in costs and lengthening of the timing	X		
DESIGN AND CONSTRUCTION RISKS				
Design risk	Risk that the design of the work is inadequate	X		
Construction risk	Risk that events may delay the realization of the work and increase the cost	X		
Final test/Commissioning risk	Risk that the new infrastructure facility does not pass the final test	X		
Materials (including also medical equipment, in my case) risk	Risk of unexpected increases in the cost of materials	X		
FINANCIAL RISKS				
Interest rate risk	Risk of changes in interest rates, with a consequent change in the cost of the project			X
Exchange rate/Currency risk	Risk that the exchange rate changes significantly leading to a change of the concessionaire margins			X
Financing risks (equity + credit/counterpart risk)	Risk that equity or debt capital is unavailable; high finance costs; lack of financial support; inability to provide long-term financing			X
OPERATIONAL RISKS				
Cost and availability of production factors risk	Risk of increasing the cost of production factors, or risk they become inadequate or unavailable	X		

Maintenance and reconstruction risk	Risk that design or construction is not of adequate quality that will result in an increase in maintenance costs	X		
Changes in the qualitative / quantitative levels of service provision risk	Risk that the administration requires changes to the agreed standards for the provision of services		X	
Failure of the operator risk	Risk that the manager fails or is inadequate for the provision of services according to established standards	X		
Technical obsolescence risk	Risk of a faster technical obsolescence of equipment			X
Early transfer of the contract for revocation risk	Risk that the provision of some services finish before the contract expires, for the reasons of public interest		X	
Staff costs risk	Risk of an unexpected increase in personnel costs		X	
Know-How and competences risk	Risk that the concessionaire uses insufficiently qualified personnel	X		
Monitoring of subcontractors risk	Risk linked to possible sub-contracts	X		
Inflation risk	Risk of changes in the rate of inflation, with a consequent change in the concessionaire's margins			X
Tariff risk	Risk of tariff variation, usually at the government initiative, leading to changes in private parties cash inflows.		X	
GOVERNANCE RISKS				
Conflicts between creditors risk	Risk that senior debt creditors come into conflict with those of subordinated debt, for example in the event of non-compliance with the civil order of privileges			X

MARKET RISKS				
Demand on commercial revenues / market risk	Risk of a contraction in demand on commercial services, with a consequent decrease in margins and revenues for the concessionaire		X	
LEGAL RISKS				
Regulatory framework risk	Risk of regulatory changes that require changes to the works and / or services and / or their timing and / or their delivery methods		X	
FORCE MAJEURE				
Force majeure risk	Risk that unpredictable events make it impossible to implement jobs or provide services			X
POLITICAL RISKS (COUNTRY/SOVEREIGN RISKS)				
Political (Country/Sovereign risk)	Risks of the change of political regime/authority/orientation of the country in which the project is launched, leading to the economic instability of the country itself.	X		
ADMINISTRATIVE RISKS				
Administrative risk	Risk that can arise, for example, in connection to obtaining authorizations on time;	X		
RISK OF PROJECT FAILURE				
Risk of project failure	Risk arising due to the combination of previous risks that could compromise the implementation of the project itself.			X

[i] According to the Constitution of the Russian Federation, Russia is a federal state and consists of equal subjects that at the moment are 85, comprising republics, territories, regions, cities of federal significance, autonomous regions and autonomous districts.