

# PUBLIC-PRIVATE PARTNERSHIPS AND THEIR RELATIONSHIP WITH SUSTAINABLE DEVELOPMENT IN BRAZIL

**Danilo de Oliveira Sampaio\***

Faculty of Business Administration and Accounting (FACC)  
DESCOR, research group  
Federal University of Juiz de Fora (UFJF)  
Minas Gerais, Brazil  
danilo.sampaio@ufjf.edu.br

## ABSTRACT

**Objective:** Public-private partnerships in Brazil started in 2004 through a federal law, but the number of these partnerships is still small. There is a need for the country to involve more private organisations in projects that have different types of risks. Given this scenario, the objective of this research was to verify the model of private public partnerships in Brazil and their relationship with sustainable development, to point out cases and present critiques evaluating the positive aspects and pointing out possibilities for improvements.

**Design/methodology/approach:** The research was of a bibliographic and documentary type, with scientific papers and Brazilian federal laws as sources of data. A case study of public-private partnerships in Brazil was also carried out to verify whether there is a direct relationship with the promotion of sustainable development.

**Results:** The results show that, despite being innovative, the Brazilian model of public-private partnerships needs to be improved. Just removing

\*Corresponding Author

the financial burden from the state and passing it on to private organisations does not solve the final situation of a partnership. There was more use of administrative concessions than partnerships, with the financial sustainability of the partnership being highlighted more than sustainable development as the basis or relation of the signed cases.

**Originality:** The research carried out is original because it relates the Brazilian model of private public partnership with the promotion of sustainable development, mainly when suggesting proposals and public policies to be implemented by the Brazilian government. In this sense, it is hoped to strengthen policy and legislation to implement and revitalise mainly the global partnership for sustainable development.

**Keywords:** Brazil; Public-Private Partnerships (PPP); 2030 agenda for sustainable development.

---

## INTRODUCTION

The behaviour of individuals when they are in the role of citizens as well as mere consumers, assumes a more critical view of society. In this case, it is observed that the citizen has been passing through a moment in which the quality of life is highlighted and value in the aspects that the citizen considers as fundamental. In this context, questions are raised by individuals about concerns regarding the environment, social inequalities and economic differences.

The scenario for the search for a better quality of life is observed in both developed and emerging countries, since a life in peace and with better conditions of citizenship is the responsibility of the people, companies, social organisations and, mainly, the governments. Citizens are better informed and aware regarding the acquisition of products of companies that have ethical policies regarding respect for nature and the working relationship. This awareness, combined with the agility of the traditional media and social networks, results in a migration of decision-making powers of purchase, which had previously belonged to the companies and happened to be in the hands of the consumers.

In a world where there is a distribution of income that is always favourable to a richer minority of the population, initiatives to implement programmes and strategies for a more sustainable world by companies are far from ideal, even if governments and companies invest in programmes of environmental, economic and social sustainability.

Organisations and consumer associations and entities that bring together hundreds of leaders from governments and companies are holding meetings and discussions to propose actions and studies for a better world in which to live. Developing and growing in economic, social and environmental terms is considered a challenge for governments, because uniting these three pillars is an exhaustive management exercise. This is because, in many cases, economic growth may involve social inequality.

The challenge in managing sustainable development with capitalism is necessary, but must be based on respect for the human being, especially those who have less available money and lower quality of life. There is no point in economic development without there being a global consumer market with possibilities of buying and using the products offered. Unemployment and lack of education caused by distorted economic growth only exacerbates the planet's social and environmental conditions.

An initiative in 2015 in New York City at the United Nations Headquarters (UN, 2015) shows that there is a path possible towards a fairer world. In this opportunity the 17 goals of sustainable development, involving researchers, companies and governments, were launched in the search for a better quality of life, with favourable environmental and social conditions.

This joint effort is to be welcomed when seeking sustainable development for the planet. The rapprochement between state and business can solve problems of financial management of governments and share responsibilities in society. With this in mind, in this research it was decided to highlight the 17<sup>th</sup> UN objective as a study proposal. This objective is to strengthen the means of implementation and revitalise global partnerships for sustainable development. By aligning the UN proposal with this work, the objective was to verify the model of Public-Private Partnership (PPP) in Brazil and its relationship with sustainable development, to point out cases and present critiques evaluating the positive aspects and signalling possibilities for improvements.

The support of the planet today is in line with the sustainability of the business – there is no way one does not depend on the other. Organisational leaders have realised that in order to achieve economic growth and consequently higher transaction volume, it is critical to work on the concept and practice of sustainable development (Fujihara and Lopes, 2009). Public-Private Partnerships (PPPs or 3Ps) bring together organisations, companies and government in favour of sustainable development, and therefore can together promote and make projects and programmes to generate economic, social and environmental growth feasible.

Until the late 1960s, in most developed and emerging countries, the state has been the major sector responsible for promoting economic and social development. With the economic crises that originated in different countries in the 1970s, we began to rethink the management model for development and growth. One of the ways, known as more liberal, was to reduce the size of the state and reduce spending by passing on part of this responsibility to companies, which, on the other hand, could have deals with sectors previously only managed by governments. In the more liberal view of capitalism, by reducing the size of the state, corporations have an active role in economic development and disown government obligations.

In addition to this introductory section, this paper has a literature review chapter on sustainable development and PPPs, followed by methodology, data analysis, final considerations and finally references.

## LITERATURE REVIEW

### *Public-Private Partnerships (PPPs)*

What is a Public-Private Partnership? In the bibliography we can answer this question according to two main aspects: the legal aspect, involving the specific legislation of each country, and management aspect, involving the results, either related to the state or companies and organisations. In the true meaning of the word, a partnership leads to an idea of mutual gain, in which the parties involved win without prejudicing each other; in the case of the PPP, in the end, the final beneficiary is the citizen.

PPPs were created from the Roman Empire, passing through Medieval Europe, America and then the Asian continent, always based on infrastructure works such as road construction, railways and exchange markets (Sundaram et al., 2016). The authors studied different countries and concluded that there is a need for a common definition of PPPs and international guidelines that can be accepted. Other researchers report the same from Sundaram et al. (2016), and add that the laws of each country make a common conceptual adjustment of PPP difficult (Whitfield, 2010).

A long-term partnership between business and government as an alternative to a division of responsibilities and resources is found in Public-Private Partnerships (PPPs). Financially relieving the state and giving new business opportunities to partner companies is the focal point of a PPP. Savas (1982) reinforces the reduction of the role of the state in the provision of public services through private companies, which results in greater public efficiency.

Two studies should be properly addressed in the implementation and analysis of PPPs with a focus on sustainable development: (a) legal study and (b) management study. Legal study is complex and depends on laws governed by each country. The management study is the responsibility of the state agency that will regulate the PPP. Some examples of sectors that use PPPs are those linked to infrastructure, such as the execution of works and services.

PPPs emerged as a public management option in the 1980s in the UK, more specifically under the Margaret Thatcher government. However, the partnership system was in fact only effectively used in the 1990s. Like any novelty that brings change, there was resistance, both from politicians and businessmen, to instituting and initiating PPPs, mainly motivated by cultural issues and even by simple mistrust.

What most interested neoliberal ideas was the fact that it reduced the weight of the state in terms of financing and infrastructure spending. On disbanding obligations before only the state, the British model of 1992 was a precursor in supporting the private initiative, which started to finance projects that previously only fell to the Government. The so-called Project Finance Initiative (PFI) eventually influenced many countries from different continents to establish their own models of Public-Private Partnerships. Brazil was one of these countries influenced; however, the partnerships in the country began late.

Since the British initiative, several countries from different continents have taken advantage of PPPs to defray state spending, and reduce the risks of infrastructure projects through the partnership relationship with companies. This discourse allowed the government to resume investments in the areas of construction of railroads, highways, hydroelectric, among other works, which promote the economic multiplier effect of generating employment, income and domestic consumption.

Grimsey and Lewis (2002) point out a total of nine types of risk factors, which, according to the authors, should be inserted and managed in PPP contracts and notices:

- (1) technical risk (engineering and design);
- (2) construction risk (materials and construction);
- (3) operational risk (maintenance and operation);
- (4) revenue risk (demand);
- (5) financial risk (flow errors);
- (6) risk of force majeure (calamities and war);
- (7) regulatory/political risk (change of government);
- (8) environmental risk (environment); and
- (9) default risk (overall project failure).

Despite knowing the possible risks of any business involving PPPs, many cases of partnerships in Brazil were cancelled or presented delays and fines; this ended up making many projects unfeasible. The Brazilian case is best explained in the next chapter.

### **PUBLIC-PRIVATE PARTNERSHIPS (PPPs) IN BRAZIL**

The Brazilian PPP model formally began with Law No. 11.079 of 2004<sup>1</sup>, known as the Public-Private Partnerships Law, which directs the types of partnerships and contracting guidelines. However, the origin of PPPs occurred years earlier, mainly due to the financial crisis of the 1980s. During this crisis, the State, previously centralised in terms of financing, was forced to carry out risk assignments in the area of public infrastructure for the private sector. This fact culminated in the creation of the National Privatisation Plan (PND) during the Collor government. By Law No. 8.987/1995, this established rules of concessions and permissions of public services for private companies.

Brazil's experience in public concessions to the private sector has shown both positive and negative results; these can be discussed and defended by different interests. One fact was that in some PPPs the state showed signs of inefficiency, mainly due to the lack of regulation control, because in many cases, the companies turned to the

---

<sup>1</sup>Law No. 11.079/2004: this Law establishes general rules for the bidding and contracting of Public-Private Partnerships within the scope of the Powers of the Union, the States, the Federal District and the Municipalities.

state banks to finance the infrastructure of the partners. The risks of PPP projects were also cases that undermined some ventures. According to Campos Lima and Coelho (2015), who surveyed 15 PPP contracts in Brazil between 2004 and 2010, the risks were more overlapping in companies than in government. However, the latter also took risks, especially in relation to public financing of PPPs.

It is necessary to point out some differences and specificities that occur involving the public sector in Brazil and partnerships involving public money. There are basically three options that allowed private initiative to engage with public partnerships and thus reduce expenses and the weight of the Brazilian state: concessions, privatisations, and PPPs.

Concessions in Brazil mainly involve the provision of services such as the maintenance of highways and railways, without the transfer of public property to companies. However, for a fixed period, the concessionaire has the right to offer and explore the public service or good. The payment of the concessions is carried out by the users using tariffs. Privatisation in Brazil configures the sale of the public good to the private initiative through an auction, and the buyers assume all expenses and losses where they occur.

In Brazil, PPP is considered as an administrative concession contract, in the sponsored or administrative modality (Law No. 11.079/2004). In the 30 articles of this law, the meaning of the contract between the public and private sector is detailed. Some of these details are:

- the provision of the service varies from 5 to 35 years;
- the amounts cannot be less than 20 million Brazilian reais (equivalent to US\$6.2 million on 31 October 2017) without a maximum ceiling; and,
- no contracts can be entered into for the sole purpose of providing labour, supplying and installing equipment, or carrying out public works.

In Brazil, both the federal government and state and municipal government can create their policies and encourage PPPs. There are two types of PPPs in Brazil: administrative and sponsored. In the administrative PPP the payment to the private sector comes only from the public sector. On the other hand, in the sponsored PPP, a certain part of the payment comes from users in addition to a part coming from the public sector.

The reduction in the size of the state was delayed and gradual, with the preparation of laws after a period of military dictatorship. Infrastructure obligations that were previously only public were gradually being reduced, and the participation of companies became part of investments for society. Starting in 1995, the state initiated a series of direct and indirect concessions, which culminated in the PPP Law.

In this paper, there is information in the data analysis about the number of PPPs in Brazil and particularities can be seen.

### SUSTAINABLE DEVELOPMENT (SD) AND THE LINK WITH PPPs

What is the definition of SD? Is there a single concept that can express SD? Checking the literature, it is observed that there are different areas of knowledge that study SD, and shows that there is not a single concept about it.

There are many concepts that lead to SD. Making the world a better place is an assumption of SD, that is, promoting a world with peace and with just employment relationships, income distribution, care for the natural environment, and respect for diversity generates a long-term structured social development.

Regardless of entering the field of discussion about the best SD definition, this research chose to establish a common point among researchers and organisations, namely, it is fundamental to attempt an harmonious interaction between social, economic developments and environmental preservation.

If there is a definition to be better dealt with in this study, one can mention that from Sachs (2004), a French-born Polish economist, who brings with him five pillars necessary to have SD:

- (1) **Social:** fundamental for both intrinsic and instrumental reasons, since social differences exist in a threatening way on many problematic places on the planet, including in Brazil;
- (2) **Environmental:** life sustaining system as a provider of resources and as a “container” for the disposal of waste (often unnecessarily produced);
- (3) **Territorial:** related to the spatial distribution of resources, populations and activities;
- (4) **Economic:** economic viability is indispensable for a country;
- (5) **Politics:** democracy is a fundamental value and a necessary tool to make things happen (Sachs, 2004, pp. 15–16).

Sachs (2004) warns that without the active participation of individuals in the five pillars, SD is compromised. The avoidance of wasting educating for conscious and ecological consumption, promoting population growth in a balanced manner, avoiding conflicts and violence, reducing poverty and miserable conditions, environmental degradation and precarious education, these are the factors that underpin SD.

Sustainable Development (SD) has been measured in different ways by researchers and governments. In Brazil, the Brazilian Institute of Geography and Statistics (IBGE) periodically carries out a report on sustainable development indicators, which has 63 indicators in four areas: environmental, social, economic and institutional. The most recent report with data up to 2015 points to both positive and disturbing statistics.

In Brazil, in social terms, the statistics show more progress than setbacks. Adult literacy and life expectancy at birth have achieved substantial improvements. The

literacy rate in Brazil, which was 91.5% in 2013, was 94% in 2015; the target for 2024 is to have 100% of the Brazilian population being literate. Another good result was between 2008 and 2009, the number of health care places per thousand inhabitants increased from 0.37 to 0.49. Malnutrition in children under five years of age declined from 18.4% between 1974 and 1975 to 2.8% between 2008 and 2009 (IBGE, 2017). Between 2000 and 2012, the Brazilian earned a further 4.7 years of life expectancy, which made the Brazilian life expectancy rise from 69.8 years of age to 74.5 years of age.

With regard to the environment, Brazil improved some indices. According to the Project for Monitoring Deforestation in the Legal Amazon by Satellite (PRODES, 2017), within the Brazilian Amazon, a region that involves nine states, only one was recorded as being high in deforestation. Between August 2016 and July 2017, the amount of deforested area corresponded to less than 1% of the total of the region.

Regarding pollution, in Brazil the most affected is air pollution, responsible for most deaths in Brazil. According to *The Lancet* (2017), a respected scientific journal, out of a total of 188 countries analysed, Brazil ranked 148th, which means that 7.49% of the country's deaths in 2015 derived from pollution.

Sustainable development is still very confused with sustainability; developing means more than economic growth. Sustainable development is a constant concern with the quality of life of the planet, the whole being bigger than some parts. All countries must meet the 17 goals in the United Nations for a better world, because the initiative of some does not ensure the success of all.

The importance of Sustainable Development and its significance has come from the creation of the Club of Rome in 1968, which aimed at the integrated debate of economic, natural, social and political aspects. The UNESCO conference on the rational use of biosphere resources took place in 1972. In that same year, the United Nations organised a conference on the human environment, creating the programme on the environment, called UNEP (United Nations Environment Programme). All these events prove the importance of SD and its necessary dissemination to society.

The moment to raise the awareness of governments and companies is over. Now is the time to charge the authorities and encourage the use of SD in practical terms, i.e., thoughts on economic growth, as well as thinking about social and environmental growth. In this sense, consumerism gives space to sustainable consumption and capitalism can finally show signs of deeper adjustment for the very continuity of this system.

In addition to a concept, SD is a philosophy that can be translated by a process of social knowledge, in which individuals, organisations, companies and government must guide public policies towards envisaging a structured and possible development of the relationship between people and the natural environment. SD is a process that aims to give a better quality of life to Man and to the planet.

The next section explains the methodological design of this research.

## METHODOLOGY

This research had a documentary and bibliographical purpose, to meet the objective of the work. According to Creswell (2003), the collection of secondary data can be done through papers, books, laws and reports in order to gain better knowledge of the facts. In this paper, different sources were consulted, which are linked to the theme of PPPs and SD. In this way, documents and research in the area of management, SD, environmental law and PPPs supported the theoretical foundation.

The data collection allowed the verification of how PPPs in Brazil are managed by the state. With the data collected in this research, other studies can be initiated and continued in order to discover solutions and improvements in PPP policies in Brazil, and even for other countries.

## DATA ANALYSIS

In this research secondary data were collected through different sources of information and knowledge, such as state and federal data, and international institutions such as the World Bank. Data were also collected from the Ministry of Planning, Development and Management of the federal government.

According to the World Bank database released in 2017, based on 150 low- and middle-income developing countries, it has been reported that Brazil and India account for 55% of private participation in infrastructure investments. Also according to

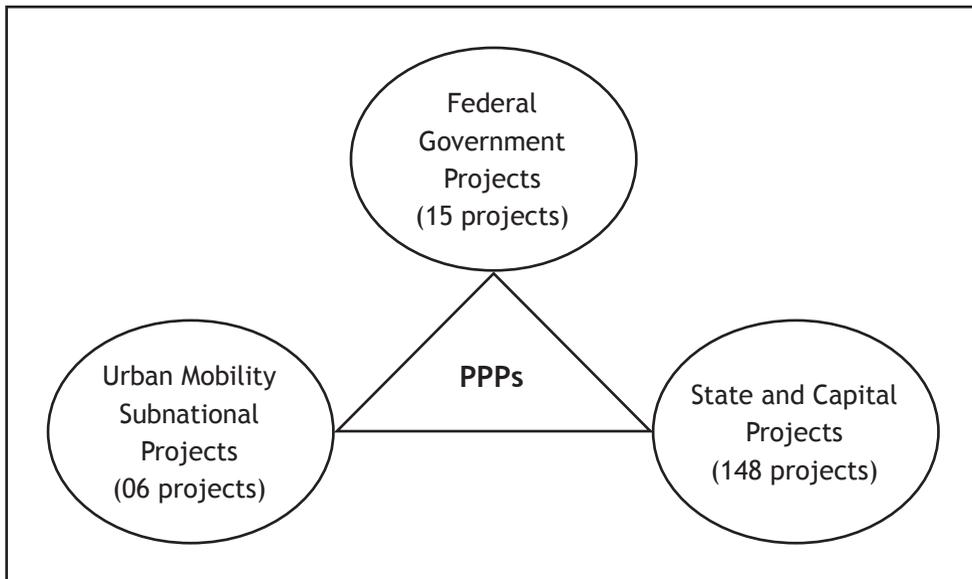


Figure 1 Types of PPP Projects in Brazil

Source: Adapted from the Ministry of Planning, Development and Management (2017)

the World Bank report, Brazil owns 87% of total investments in the Latin American and Caribbean region (World Bank, 2017).

Campos Lima and Coelho (2015) point out that between 2004 and 2010, PPPs in Brazil obtained a greater presence of international companies (60% of cases) than the domestic companies (40% of cases). For the authors, it was evident that the concession period was long, that is, it was found that 47% of PPPs in Brazil by 2010 were between 26 and 35 years, 13% between 21 and 25 years and 40 below 20 years.

PPPs in Brazil are mostly for construction and infrastructure works, especially roads, ports, football stadia, schools, water and sewage treatment plants, construction of subway stations, construction of prisons, airports and others.

In Brazil, data on PPPs performed are segmented in the Ministry of Planning, Development and Management (2017). These data refer to three types of projects, being federal projects of PPPs, state projects and subnational projects (see Figure 1).

According to the Ministry of Planning, Development and Management (2017), there have been 15 federal projects carried out in Brazil (see Figure 2).

1. Datacentre Complex
2. Military College of Manaus. Construction and maintenance of a new Military College in Manaus - AM
3. Physical Education Centre Almirante Adalberto Nunes (CEFAN)
4. National Parks of Jericoacoara, Serra das Confusões, Sete Cidades and Ubajara
5. Vila Naval de Itaguaí - Module I
6. Supply and Fleet Management (AGEFROT)
7. National Parks of Brasilia, Chapada dos Veadeiros and Emas
8. Arsenal of the Navy
9. Fuzil-Imbel
10. Irrigation Point
11. Sustainable Esplanade
12. Brazilian Geostationary Satellite
13. Digital Public TV Network (RTVDB)
14. BR 116-324
15. North-South Railroad

**Figure 2** Federal PPP Projects in Brazil

*Source:* Adapted from the Ministry of Planning, Development and Management (2017)

On the other hand, state projects are greater in number, totalling 148 in the different sectors, such as highways, schools, hospitals, football stadia and sports complexes, hotels, among others.

There were six subnational projects for urban mobility; these were the subways of São Paulo, Salvador, Curitiba, Porto Alegre, Rio de Janeiro, and Light Rail Vehicle (VLT) in Rio de Janeiro. There are three projects in operation, and the other three projects are currently in the public query or study phase.

One of the main problems of PPP projects in Brazil is the slowness and bureaucracy of the processes, as well as an efficient control of regulation. For these reasons, the Public Ministry has audited and found management problems, which further delay the execution of works.

## FINAL THOUGHTS AND RECOMMENDATIONS

The objective of this study was to verify the model of Private-Public Partnerships in Brazil and its relation with Sustainable Development, to point out cases and present critiques, evaluating the positive aspects and pointing out possibilities for improvements.

Given the context of the Brazilian model of PPPs, there are indications that the SD concept is not contemplated, since the focus on the results of the partnership projects focuses on the economic aspect above any other environmental and social aspect. The British neoliberal model that influenced Brazil and several countries in the policy of creation and implementation of PPPs, contemplates regulation and privatisation, through the principle of economy and a heavy and over-spending state. In the case of Brazil, PPPs in those projects that actually met the desired result, reached the finalisation of infrastructure works, and generated a tax exemption for the State. However, from an environmental and social point of view, the legacy left until then was minimal.

In Brazil, several PPP projects were interrupted by the Public Prosecutor's Office, due to the slow execution of the works, and the financing and irregularities found throughout the project. In addition, it is observed that there is a need for legal improvements to be avoided over the course of contracts, for companies to withdraw due to lack of, for example, financing for infrastructure works.

Despite the necessary and fundamental improvements to the PPPs, the Brazilian model is in the process of adjustment. They have already achieved, with many problems, some improvements and have implemented some important PPPs, such as federal highways, works for the Football World Cup in 2014 and for the Olympic Games in 2016, mobility systems such as subway stations in the main Brazilian metropolises, and many others.

PPPs have a less overburdened state in terms of building infrastructure works, and in most cases, they also favour greater agility to rely on the initiative of the private sector. In these cases, the citizen wins a service that will be implemented even faster. In the Brazilian model, PPPs do not have good control by the Government of the whole partnership. This can lead to a decrease in the quality of the works carried out, as well as a corrupt system that may favour some contractors, who have recently been accused by the Public Prosecutor's Office of corrupting public managers. These cases of corruption are being exemplarily treated by the Ministry of Justice with the support of the Federal Police of Brazil, and especially the opinion power of the Brazilian citizen, who is harmed by the inefficiency and control of PPPs.

As suggestions for recommendations for improvements in the planning of PPPs for the Brazilian case, this research points out that:

- (1) in developing PPP policies, the Brazilian government must be rigorous in placing items in projects that include the tripod of the SD, or the triple bottom line, profit, people and planet, during and after the project ends. It should become a formal requirement to enforce the obligations of the executing companies on the economic benefits to the local population where the work will be carried out, with respect to environmental laws and social development;
- (2) a monitoring of each stage of the project by a designated team should be carried out, which should check whether the company is complying with both the correct execution of the schedule and applies the tripod of the SD;
- (3) in the project, make the management of risks arising from the PPP in order to safeguard public money clear;
- (4) to take account of the State for a dependence on private companies in the execution of public works without the criteria of control and regulation, which may provoke inefficiency and disregard the sovereignty of the Federal Constitution, a law is required that regulates the democratic state of law in Brazil; and finally,
- (5) it is recommended to train and instruct the new generation of public and private managers by training them in the concept of SD application, as well as to demand transparency and administrative and ethical efficiency of public agents involved in PPPs.

Finally, for future study possibilities, it is expected that the work will continue through field research, collecting primary and non-secondary data. In this way, it is planned to link SD to the context of PPPs by conducting interviews with managers of private companies, public managers, and the Public Prosecutor's Office. This is in order to verify with each of these agents, positive and negative aspects of the PPP model in Brazil and its link with SD in the search for more equality, social justice and environmental development.

### Support and thanks:

- ✓ *This research was supported by the Research Support Foundation of the State of Minas Gerais, Brazil (FAPEMIG).*
- ✓ *The DESCOR research group supported this work.*

## REFERENCES

- Brazilian Institute of Geography and Statistics (IBGE) (2017), *Indicators of sustainable development, Brazil 2015*. Retrieved from: <https://biblioteca.ibge.gov.br/visualizacao/livros/liv94254.pdf>., on 19 October 2017.
- Campos Lima, C.M.and Coelho, A.C. (2015), Alocação e mitigação dos riscos em parcerias público-privadas no Brasil. *Revista de Administração Pública - RAP*, v. 49, n. 2, mar–apr., p. 267–91.
- Creswell, J.W. (2003), *Research design: Qualitative, quantitative, and mixed method approaches* (2<sup>nd</sup> edn). Thousand Oaks, CA: Sage.
- Fujihara, M.A. and Lopes, F.G. (2009), *Sustentabilidade e mudanças climáticas: guia para o amanhã*. São Paulo: Senac.
- Grimsey, D. and Lewis, M.K. (2002), Evaluating the risks of public-private partnerships for infra-structure projects. *International Journal of Project Management*, Vol. 20, No. 2, pp.107–18.
- Ministry of Planning, Development and Management of Brazil (2017), *Projects of PPPs*. Retrieved from: <http://www.planejamento.gov.br/assuntos/desenvolvimento/parcerias-publico-privadas/projetos>, on 13 September 2017.
- PRODES (2017), *Project for Monitoring Deforestation in the Legal Amazon by Satellite*. Retrieved from <http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes>, on 11<sup>th</sup> August 2017.
- Sachs, I. (2004), *Development: inclusive, sustainable, sustained*. Rio de Janeiro: Garamond.
- Savas, E.S. (1982), *Privatizing the Public Sector: How to Shrink Government*, Chatham House Publishers, Chatham.
- Sundaram, J.K., Chowdhury, A., Sharma, K. and Platz, D. (2016), Public-Private Partnerships and the 2030 agenda for sustainable development: fit for purpose? DESA working paper n. 148ST/ESA/2016/DWP/148, Department of Economic & Social Affairs, United Nations, New York, N.Y. from: [http://www.un.org/esa/desa/papers/2016/wp148\\_2016.pdf](http://www.un.org/esa/desa/papers/2016/wp148_2016.pdf), on 25 August 2017.
- The Lancet (2017), *The Lancet Commission on pollution and health*. Retrieved from: <http://www.thelancet.com/commissions/pollution-and-health>, on 25 January 2017.
- United Nations, UN (2015), *Sustainable Development Goals*. Retrieved from <https://sustainabledevelopment.un.org/?menu=1300>, on 29 August 2017.
- Whitfield, D. (2010), *Global Auction of Public Assets: Public sector alternatives to the infrastructure market and Public-Private Partnerships*, Spokesman Books, Nottingham.
- World Bank (2017), *Report on private participation in infrastructure*. Retrieved from: [http://ppi.worldbank.org/-/media/GIAWB/PPI/Documents/Global-Notes/PPI2017\\_HalfYear\\_Update.pdf](http://ppi.worldbank.org/-/media/GIAWB/PPI/Documents/Global-Notes/PPI2017_HalfYear_Update.pdf)., on 16 October 2017.
-

## BIOGRAPHY

**Dr Danilo de Oliveira Sampaio** is professor of Marketing and Consumer behaviour at the Faculty of Business Administration and Accounting (FACC), at the Federal University of Juiz de Fora (UFJF), Juiz de Fora, Minas Gerais, Brazil. He has a Doctor of Business Administration from the School of Economics (FACE), Centre for Graduate and Research Administration (CEPEAD), Federal University of Minas Gerais (UFMG), Minas Gerais, Brazil. He is a researcher in marketing and consumer behaviour in the area of sustainable development in terms of public administration and business management, and author of articles in journals and at national and international conferences. Dr Sampaio is coordinator of the Master's Degree in Business Administration and the research group Descor.