

**PUBLIC AND PRIVATE PARTNERSHIPS AS AN ALTERNATIVE AFTER
THE CONFLICT**

By

COLMENARES SUAREZ, Mario Andres

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF PUBLIC POLICY

2018

**PUBLIC AND PRIVATE PARTNERSHIPS AS AN ALTERNATIVE AFTER
THE CONFLICT**

By

COLMENARES SUAREZ, Mario Andres

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF PUBLIC POLICY

2018

Professor Jongyeon LEE

**PUBLIC AND PRIVATE PARTNERSHIPS AS AN ALTERNATIVE AFTER
THE CONFLICT**

By

COLMENARES SUAREZ, Mario Andres

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF PUBLIC POLICY

Committee in charge:

Professor Jongyeam LEE, Supervisor



Professor Kang Soo KIM



Professor Sherzod SHADIKHODJAEV



Approval as of December, 2018

Public and Private Partnerships as an alternative after the conflict

INTRODUCTION

The study of the infrastructure, as a development tool, has become an important issue in the public policy researchers and social development studies around the world. The case of Latin American and the Caribbean has been a focus of interest to international cooperation institutions as the World Bank (2005) and The commission of UN to Latin America and the Caribbean (CEPAL, 2011). So, since the last decade of the last century, there is a rapidly growing literature on infrastructure to development. Starting with the studies of Canning D. (1998) to the World Bank, and continue with the gap estimation made by Claderon and Serven (2002, 2004); however, this literature shows little agreement on the use of Private public Partnerships as a way to tend to close that gap.

Previous research as Van Ham and Koppenjan (2001) has argued that the PPP are a significative tool used by the public sector in cooperation with the private sector, where both share risk, cost and resources, to provide public goods and services in the most possible efficient way. Under the same line authors as Donahue and Zeckhauser (2011) shown that the main objective of the PPP is the common development of the country and the active participation of the citizens in the decision taken process. On the other hand, an

academic figure as Lipschutz and Rowe (2005) argues that the PPP, in a middle term, go against the traditional democratic values, as part of a clear interest of mercantilist all the political process of developing and government an undeveloped country. This thesis will, however, aim to show the feasibility of using public and private partnerships as a way to develop infrastructure projects in more the half part of the Colombia national territory, who has been affected by the narcotrafic and the conflict between the illegal armed groups, as part of the inclusion and reconciliation process. I will argue that PPP are an efficient tool, to improve the development in this area, considering limited resources.

This thesis will contribute to our understanding of the PPP as a tool to improve the development process in Colombia. In addition, I will claim that the infrastructure gap in the half part of Colombia have to be close as a way to generate development and at the same time support the reconciliation process and as a system to support the fight against the illegal corps. So, this research will attempt to answer the following research question: Are the BTL public private partnerships an efficient tool, to close the infrastructure gap in the half part of Colombian territory and to promote the development of those areas, particularly in which the government wants to promote a policy of substitution of illicit crops? The focus of this thesis is to probe that the BTL-PPP are an efficient tool, to contribute to close the transporter infrastructure gap in these vulnerable areas of the country. The first part presents a literature review on public and private partnerships and infrastructure as a way to promote development. Next, I present the economic and social current situation in Colombia, empathizing in those departments whose has been affecting by the armed conflict, the presence of illegal corps as well as the incipient (or null) transport infrastructure connection. Then, I examine the case of U.K, highlighting the experience of

the M-25 or London Orbital Motorway. Succeeding, using the M-25 case as a reference and keeping the validity legal and normative frame in Colombia I analyze from a comparative perspective the use of DBFO-PPP to develop transport infrastructure in those remote regions of the country with the experience of U.K Finally, I provide some conclusions of the investigation.

LITERATURE REVIEW

Public and Private partnerships (PPP) has been an area of active interest since the beginning of the last decade of the XX century. According to David Hall (2015) the idea of private sector investing in public services data from the XIX century in public industries as railways, gas, water and electricity, nevertheless, the modern concept was invented during the Thatcher era in UK. Since then the U.K have been used the PPP model in the provision of different services and in the supply of infrastructure requirements as roads and rails. Since the 1990S, PPP have begun to call attention to development banks, who at the same time introduce the concept in countries from the third world countries, particularly in Latin America.

Before proceeding further, it is necessary to define clearly the key terminology referred to in this research paper. As far as the secondary literature and this study are concerned, Public Private Partnerships (PPP) will refer as a risk-sharing relationship based on a shared aspiration between the private and public sector (Grismsey & Lewis, 2007; Osborne 2000).

Previous research conducted by Van Ham and Koppenjan (2001) has argued that the PPP are a significant tool used by the public sector in cooperation with the private sector, where both share risk, cost and resources, to provide public goods and services in the most possible efficient way. Under the same line authors as Donahue and Zeckhauser (2011) have showed that the main objective of the PPP is the common development of the country and the active participation of the citizens in the decision taken process. On the other hand, an academic figure as Lipschutz and Rowe (2005) argues that the PPP, in a middle term, go against the traditional democratic values, as part of a clear interest of mercantilism of all the political process of developing and government an undeveloped country.

The evaluation process of a PPP traditionally has been related directly with their economic performance, that's why authors as Burger & Hawkesworth (2011) and Grimmsey & Lewis (2005) have examined a PPP according with its value for money aspects. In the same fashion, Tiong, Yeo & McCarthy (1992) and Zhang (2005) have claimed that the PPP only can be measurement under the critical success factor systems. In contrast this analysis pretend to use the variable of efficiency as the criteria of success, keeping in mind that in this particular case the PPP is expecting to work as a integration and reconciliation tool.

There is a stark contrast between David Hall (2015) and The World Bank Group (2015). Hall argues that the infrastructure develop has to be supply just by the public institutions and using public finances for investment because under this way the positive externalities are going to be higher, particularly in the generation of formal jobs, also he claim that

government can use taxes revenues as a cheaper and effective long-term finance. The World Bank (2015) gives a different perspective indicating that PPP can help to improve the quality of infrastructure in development countries that partially is deriving from the insufficient funding in the public sector also the negative impact of the financial crisis in the public finances of development countries, constrain their chances to access to long-term finance (World Bank, 2015). Although Hall's support strongly his perspective and seems coherent and efficient in (at least) medium level income country, we have to admit that the current budget in Colombia, with a deficit of 4% of the total GDP in 2016, makes impossible in the short term the supply of this type of transport infrastructure. Therefore, in this context the alternative of PPP seems an attractive route to improve and supply the infrastructure gap that it is the main concern of this study.

Having discussed the concept of PPP, let us now turn to infrastructure as a development tool. Infrastructure, as a development tool, has become an important issue in the public policy researchers and social development studies around the world. The case of Latin American and the Caribbean has been a focus of interest to international cooperation institutions as the World Bank (2005) and The commission of UN to Latin America and the Caribbean (CEPAL, 2011). So, since the last decade of the last century, there is a rapidly growing literature on infrastructure to development. Starting with the studies of Canning D. (1998) to the World Bank, and continue with the gap estimation made by Claderon and Serven (2002, 2004); however, this literature shows little agreement on the use of Private public Partnerships as a way to tend to close that gap.

Because I want to focus on the efficiency of the PPP in terms of feasibility as an effective tool to promote the reconciliation and integration of the half part of Colombia, I will not attempt to analyze or evaluate the PPP in terms of economic benefits and costs. This study does not attempt to include consideration of the provision of other services different to transport infrastructure. This paper will be limited to discussion on the PPP in the service purchase type (BTL) because make possible an intervention without a big initial investment of the government, so I am choosing to ignore the PPP concession type (BTO). For practical considerations and access to the information, this paper is limited to use as reference the U.K experience of implementation of PPP BTL type, particularly to the case of the M-25 motor way widen. Instead, the comparative analysis with other countries, with experience in BTL projects as Korea and Australia, could be the subject of future valuable research.

Why the public private partnership alternative:

The necessity for infrastructure development has been a constant since the beginning of the history; consequently, the governments traditionally have been concern about this issue. Nonetheless, under limited resources and budgetary difficulties, most of the countries (particularly developing countries) prioritize other “strategic issues” like security, public debt, education, and other social issues, that necessarily has to been fulfilled in a short term. Therefore, the infrastructure investments use to be under-funded in many countries around the world. The case of the countries in Latin America is not the exception, according to the Inter-American Development Bank “ the additional investment needed in infrastructure in

Latin America amounted to \$100 billion per year- Two percent of regional GDP over an extended period” (IDB, 2014).

Under this scenario, the World Bank PPP Knowledge Lab suggests that PPP could be an interesting alternative to increase the fiscal space. However, the tool has to be well used. Hence, the institution suggests an evaluation about the alternatives considering the nature of the project. So if it is an User-pays contract, it will probably create a long-term fiscal space, on the other hand, a contract that includes availability payments create fiscal space only in the short term (PPP KnowledgeLab, 2017). Furthermore, PPP can be used by the government as a financing mechanism to overcome short-term cash budget constraint by dispersal the costs over the lifetime of the project. An interesting example of this is the N4 toll road between Mozambique and South Africa where this two countries allows a single cross-border operator to maintain the road and serving user even though neither of two governments had enough found to do it in a short term.

Another interesting example is described by William Maddex in his thesis “The rigor of negotiation; why public-private partnerships are effective” where he compared the use of a PPP project against the traditional Design Bid Build (DBB) method in the operation and maintenance of the Presidio Parkway in California, showing that after a value for money analysis the net calculated saving to the project cost was 147 million dollars. Subsequently, the PPP cost was calculated to be \$488 million compared to \$635 million for the DBB method, according to the author this could be explained by the differential in the risk-

adjusted construction costs of the two models, as well as, by the possibility of a better and rigorous negotiation performed in PPP projects. (MADDEX, 2012)

COLOMBIA

Country Snapshot

Colombia is located in South America in a tropical area, border by Venezuela, Brazil, Panama, Ecuador and Peru, as well as by the Caribbean Sea and the Pacific Ocean. With a population of 49.364.592 (according projection of the National Statistics Administrative department DANE. Retrieved 10 August 2017) and with 1,141,748 km² of total land area, Colombia has a concentration index of 43, 9 habitants per sq. km of land area (World Bank data 2016). The country is currently growing at a rate between 2% - 3% according to the central Bank (Banco de la Republica de Colombia, 2017).

1. Macroeconomic

Colombia's macroeconomic variables had been growing strongly since the first decade of the 2000's and until 2009 when after the financial crisis the growing level decrease, however has never experimented a negative growing rate in the last decade. The Gross Domestic Product (GDP) as at 2016 stood at US\$ 282.46 (billions) which represent a real growth rate of 1,7% reducing from earlier rates of

3,1% and 4,4% in 2015 and 2014 respectively (World Bank, 2017). The GDP per capita has been also decreasing from US \$7,913 in 2014 to US \$5,806 in 2016 while the inflation rate has increased from 3,2% in 2012 to 7,5% in 2016 (World Bank, 2017).

The Colombia's 2016 negative (-) account balance was US\$12.541.083.843 which is a reduction from the 2015 current account balance of negative (-) US\$18.780.374.304. However, since 2015 the public debt has reduced from 50,6% of GDP in 2015 to 50,2% in 2016 and a present estimated value of 48,5% of GDP.

2. **Business Climate:**

A factor who determines the grade of private investment in the public sector is the business climate. Globally the business climate is measured by the following indices:

2.1. Rule of Law Index:

This index, in a scale of 0 to 1, uses the experiences of a group of expert, as well as, the general public opinion to measure the rule of law across different countries. In the index 1 means solidest adherence to rule law. For the case of Colombia, the country scored 0,55 in 2014, decreased to 0,50 in 2015. Currently, Colombia is scored 0,51 in 2016 (World Justice Project, 2016).

2.2. Corruption perception Index:

In a scale from zero (0) to one hundred (100) the corruption perception index (CPI) measures corruptions perception in criticizes among several countries. Colombia has ranked 90th out 176 countries with a score of 37 in 2016. Unfortunately the Colombia's index has been increasing since 2013 when the score was 36, risen to 37 since 2014 (Transparency International, 2017).

2.3. Business Freedom Index

The Business Freedom is an indicator between 0 and 100, where 100 is the best freedom environment for business. The index measures the difficulty to starting, operating and closing a business. (The Heritage Foundation, n.d).

Colombia with a score of 69,7 is 37 in the global rank, been classified as “moderately free”. Since 2015 the country has been losing place in the rank. However in average is seen to have scarcely fluctuated since 2012.

2.4. Global Competitive Index

The Global Competitiveness Index evaluates the competitiveness of 138 economies. The index scored each economy from 1 to 7, been the last one the most competitive. To build the index, the World Economic Forum analyzes the institutions and policies who affect the productivity level of the economy.

Colombia has marginally ascending in the rank from the 66th position with a score of 4,23 in 2015 to a 61st place in 2016 with a score of 4,28, and 4,30 in 2016 keeping the same position in the global rank. (World Economic Forum, 2017).

3. Fragility:

Even though Colombia has been facing an internal conflict since the middle of the last century, it’s democracy index is in average similar to the other countries in the region graded by the Economist Intelligence

Unit’s Democracy Index with 6.67 points in 2016, value compatibly higher against the score of 6.62 in 2015 and 6.55 in 2014 (The Economist Intelligence Unit, 2017). However, it is a fact that the

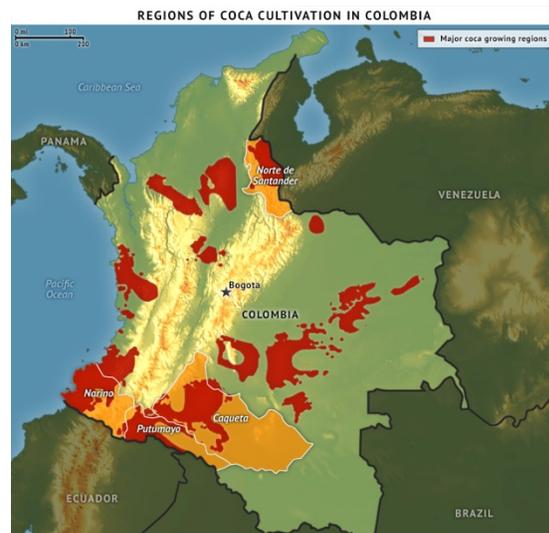


FIGURE 1 Source: United Nation Office on Drugs and Crime

country is living a currently episodes of social instability, particularly in some regions with a lack attendance of the central government and with a strong influence of illegal economies, in particular the farming of illegal crops (Coca and marijuana). Those areas are particularly concentrated in the departments in the south of the country as Nariño, Cauca and Putumayo, as well as in the border with Venezuela, in the north and in the border with panama in the department of Antioquia.

3.1 Narcotrafic:

Since the decade of the 70'S of the last century the traffic of illegal drugs has been an issue in the political agenda of the country. At the beginning Colombia was just the port to move the drugs from Peru and Bolivia to United States. Nevertheless, at the ends of the 70'S the biggest criminal structures, dedicated to traffic of illegal drugs, appear and at the same time supported the introduction of massive illegals crops and the transformation, production and traffic of illegal drugs as well. These criminal structures, denominated "Carteles", were persecuting by the Colombian central government, supported by the government of United States until the ends of the 90'S when this biggest structures almost mutated to many smaller structures dispersed across the country, with particular interest in those areas strategic for this illegal economy, particularly the borders with Venezuela, Ecuador and Panama, always looking for weakest governmental structures and easy access to ports in the Caribbean sea and the pacific coast.

3.2 Internal conflict:

Since the independence of the country in the XIX century, Colombia has been living a constant tension between different social, political and economic perspectives, and unfortunately most of them have been ending in internal conflicts and civil wars. So the phenomenon of the guerillas has been a constant in the history of the country.

Nonetheless, the situation got worst with the narcotraffic, because most of these groups found an important source of financial support. So after the decade of the 80'S the guerrillas in Colombia get stronger military and economically. During the last decades of the last century guerrillas as the M-19, ELN and FARC-EP attacked governmental institutions, oil and energetic infrastructure and small and medium towns, particularly those far away from the biggest urban centers.

At the end of the century the government signed a peace agreement with the guerrilla of the M-19 and recently agrees another one with FARC-EP and is in the middle of a negotiation with the ELN, so the violence and the affectation to the physical infrastructure has been dismounting and the security perception in the most develops regions in the country is increasing. Contrariwise the violence and the illegal economy in the most undevelopment regions has been increasing, because without the guerrillas new local actors are fighting each other to get the control of the areas, particularly those with illegal crops, situation that is getting worst because the lack presences of the state and the central government in those areas.

4. Transportation Infrastructure:

The deficiency of the transportation infrastructure has been an issue since Colombia exists as an independent republic. Many articles agree that the lack of transportation infrastructure impact negatively in the competitive index of the country. According to

the World Bank between the 20% and 30% of the over cost in the national production is because the poor quality of the transportation infrastructure.

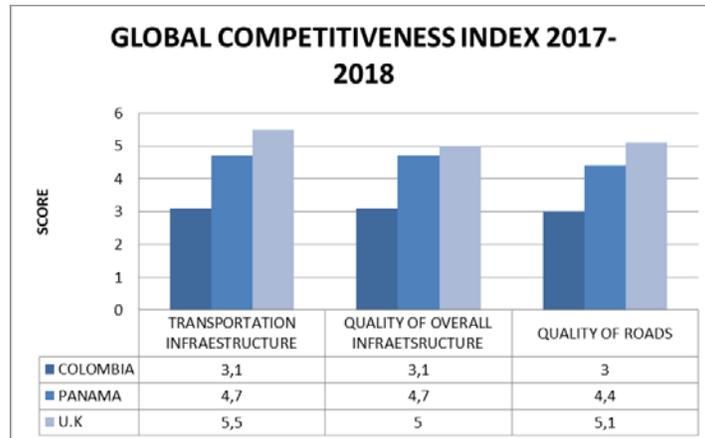


FIGURE 2 Source: WORLD ECONOMIC FORUM,

In the Global

Competitiveness Index

2017-2018 Colombia is ranking in the 98th place, under many countries of the region such as Panama, Mexico, Chile, Ecuador, Brazil and Peru. With a score of 3.1 in transportation infrastructure, situation that is getting worse in issues like quality of roads (3.0) and quality of railroad infrastructure (1.5). The contrast is dramatically when it is compared with one of the top 20 countries ranking like the United Kingdom whose score is 5.5 in transportation infrastructure and 5.1 in quality of roads.

PPP Experience:

Even though the Public and Private Partnerships (PPP) has been a recurrent tool to develop infrastructure in Colombia since the political constitution of 1991, it was not until January of 2012 with the law 1508, when the government created a regulatory frame exclusively to

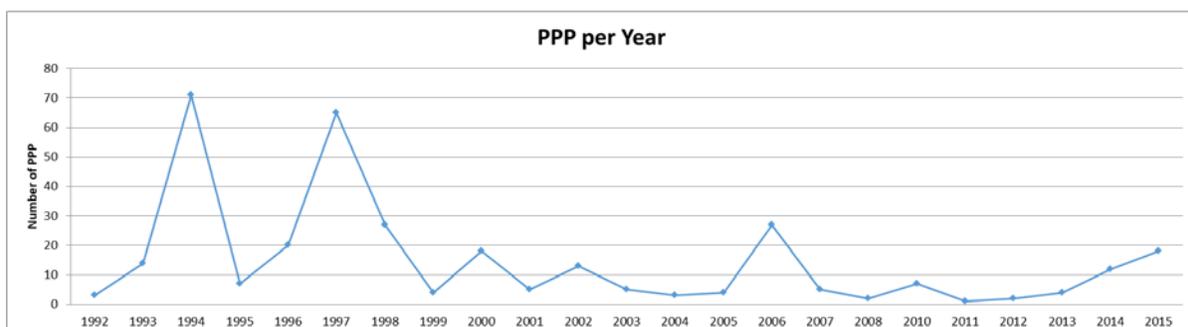


FIGURE 3 Source: World Bank, 2016

regulate the PPP. This was because the current government has been trying to keep the positive economy growing rate, even though the fall of the oil price has been affecting the economy and the public finance. So the PPP is part of the strategies to maintain the inversions levels in the country.

According to data provide World Bank (PPP Knowledge lab, 2017) the amount of the investment in PPP, since the last decade of the last century until now, is around \$33,181 US\$ million, with 132 active projects (Those projects whose are under construction or operating). While recently the focus of the government is the development of transportation infrastructure, traditionally the projects have been disseminated in different sectors as Energy, communications and water and sewerage. Consequently, the experience of the country in this type of project is not short, in fact there are some of this projects who have achieved all the cycle and are in the last period of the concession period.

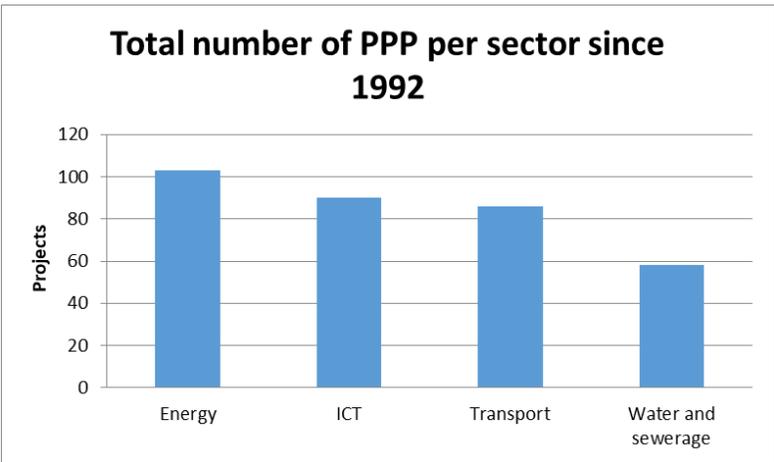


FIGURE 4 Source: World Bank, 2016

Unfortunately, during these years the system has faced corruption scandals, such cases where privates companies used to pay suborns to highest public officer to receive projects with representative's cases as

“The road of the Sun” with the Brazilian company Odebrecht and the development of the third phase of the Bus rapid transit system in Bogota, because of the last one the Bogota’s Mayor of that time is currently in jail, after a long trail where he and his brother (a senator

at that time) where found guilty in one of the most infamous case of corruption in the country. Nonetheless, the government has been developing policies to regulate the PPP and attract more private investors.

According to Mauricio Rodriguez Munera, ambassador of Colombia to the United Kingdom and founder and former director of Portafolio, Colombia's most prominent economic and financial newspaper, the singular interest of the government in the PPP, is because it seems and attractive alternative to overcome the low quantity and quality of infrastructure development in the country (Infrastructure Journal, June 2012). That's why the Colombian government has been working in a strongest regulation frame that includes the creation of the Colombia's National Infrastructure Agency (ANI) and the law 1508 of 2012, the PPP Law.

TRANSPORTATION INFRASTRUCTURE FOR THE PEACE

The inefficiency of the transportation infrastructure system is not a recent issue in Colombia, in fact since the end of the XIX century, the lack of roads and efficient transportation system has defaulted the governability among many areas of the country, consequently most of those areas have been facing more difficulties to achieve a minimum development standard, becoming less competitive and economically inefficient. In this context emerged different types of social movements, who used the inefficiency of the central government as a platform for revolutionary and insurgent movements, or even for movements who claim for independence. Even though, traditionally the central government has insisted in focusing all their investments to develop infrastructure in the most economically active zones, particularly in the infrastructure to connect the center of the country, Bogotá, with the ports in the Caribbean area and some other productive areas, most of them in the Andina region. Therefore, the infrastructure in almost half of the national territory is almost inexistent, generating that those areas became in our days the center of illegal economies and insurgent movements.

An interesting example of this absence of the state is Tumaco, a municipality located on the Pacific coast at the south of the country. In our days, Tumaco is perhaps one of the most violent places in Colombia, plus the area who more illegal crops concentrated. At the same time is one most abandoned municipalities, so their habitats traditionally has been facing difficulties in the receptions or even the non-existence of public services like electricity,

clean water, and sewage system. The lack of transportation infrastructure makes that legal economies as fishing and cacao harvests became inefficient and unprofitability. Consequently, the illegal crops and the production of cocaine turn into the base of the economy in the region. So the central government has been focusing their efforts in forcing the farmers to substitute the illegal crops by legal crops, however, as it was mention before, the lack of infrastructure and investment in new farmers or fishing technologies makes unprofitable and inefficient any type of legal economies (MOLANO, 2016)¹.

After the sign of the peace agreement between the central government and the terrorist movement of FARC-EP, everyone was expecting that the social situation of Tumaco will improve however instead of getting better the situation has been getting worst. That's because, with the absence of the FARC-EP controlling the illegal economy, many medium-size illegal movements start to fight against each other and against the central government to assume the control of the illegal economy. Additionally, the central government has been neglect in the exercise of their functions in the area as well as in providing real an efficient alternative to the people from Tumaco to substitute those illegal crops.

According to The United Nations Office for Project Services (UNOPS) there is an agreement that conflict, fragility, and development are interlinked (UNOPS, 2017), consequently, cases as the Tumaco are an example of how low levels of development generate and feed conflicts, nonetheless the study of the incidence of transportation

¹ MOLANO, Alfredo. "La otra cara de la sustitución de cultivos" (The other side of crop substitution). 11 JUN 2016. <https://colombia2020.elespectador.com/pais/la-otra-cara-de-la-sustitucion-de-cultivos>

infrastructure development on conflict resolution is still under development and has a limited record track. The UNOPS understand the importance of infrastructure development as *“more than just a physical output. Rather, infrastructure is an increasingly important element, or mediator, in the way in which social actors organize themselves. Infrastructure can only become effective in society; if it is ‘connected’ to other processes and networks. In other words, ‘infrastructure is something that emerges for people in practice, connected to activities and structures.”* (UNOPS, 2017)². Consequently, and before to continue, it is important to emphasize that the transportation infrastructure is not a panacea for cases like Tumaco’s and probably will not have any effect on the peacebuilding process, without the support of the other public institutions. However, it is clear that without this infrastructure development, the situation is far away to get better.

Many international experiences, like the Center Africa Republic and Afghanistan, have shown the importance of roads and highways as a way to extend the geographical reach of state authority of the central government, as well as a tool to extend the security provision into conflict-affected zones. According to Ian Taylor, there is evidence that supports the link between the absence of infrastructure with conflicts, and at the same time, the author insists in the historical key role that infrastructure development has played in the consolidation of the modern strong states. (TAYLOR, 2014)³. Nonetheless, the experiences led by UNOPS have shown that it is also important to include local communities as a part of the decision-making process in this type of projects, other ways, it will be a high risk of

² UNOPS AND DIIS. Roads to Peace? The Future of Infrastructure in Fragile and Conflict-Affected States. Copenhagen, January 2017,

³ Taylor, Ian. “Evidence of the Contribution to Stabilisation of Trans-~~port~~ Infrastructure.” (London: DFID, 2014).

generating new conflicts and new problems. At this point, it is important to remember that every infrastructure project will impact in economic, political, social and environmental areas. So it is necessary an agreement in the way and in the costs (not only economic but social and environmental as well) that all the community are willing to pay to accomplish the infrastructure requirements for economic competitiveness.

To conclude this section, it is important to insist on the necessity of transportation infrastructure development as a way to overpass the conflict and the illegal economies, originated in the narcotraffic, in Colombia. However many experiences have shown the importance of including the local society in the decision-making process, as well as the necessity of considering the environmental impacts. In this particular point it is important to considerate to the cost of do nothing, in Colombia the narcotraffic and other illegal economies around the deforestation have been causing the biggest environmental impact in the tropical forest, particularly in the Amazon area, according to Colombian antinarcotic police in 15 years were affected more than 608 000 hectares of jungle by illegal crops (POLICIA NACIONAL, 2014)⁴. However, that does not mean that infrastructure development has to be done at any cost, in fact, UNOPS has been working in infrastructure development models that *“make sure that infrastructure delivery does not exceed the bounds of negative determinations during construction, they have limited bearing on the broader environmental impact of infrastructure use after completion. At the same time, the impact of infrastructure projects is often positively assessed in terms of indicators of economic growth, usually counted in terms of traffic intensity”* (UNOPS, 2017).

⁴ POLICIA NACIONAL. COCA: Deforestación, contaminación y pobreza (COCA: Deforestation, pollution and poverty). Colombian National Printing. Bogotá D.C. 2014

THE M-25 OR LONDON ORBITAL MOTORWAY WIDENS EXPERIENCE

The use of PPP in transportation infrastructure it is not an unknown spectrum for many governments in our days, countries like Australia, Korea, Germany and U.K has experimented a lot of successful experiences in this area, even Colombia has been a point of reference of the use of PPP in the region. Nonetheless, most of the experiences in PPP has been closer to the Build Transfer and Operate (BTO) model, so it is not easy to find experiences of PPP in transportation infrastructure using models like the Build Transfer Lease (BTL) as well as the Design Build Finance and Operate (DBFO) model. In this way, perhaps U.K has been at the vanguard and one interesting example is the widen of the London Orbital Motorway.

The M25 or London Orbital Motorway is one of the most important Highways in United Kingdom. Located around London and with an extension of 188 km and recorded by an average of 200,000 vehicles in a busy day (according to Highways Agency), the M25 is the second largest orbital road in Europe. Originally design during the earliest first half of the XX century, was not until the beginning of the 70'S when finally the construction began, starting to operate in 1986 as a dual motorway with three lines. Nevertheless, 7 years after the begging of the operation, in 1993 the national media reported that the traffic exceed the double that was expected (The Independent, 1993). Consequently in 1995 started the plans to expand from six to eight lines the Highway, with the contract of widen the section

between Junctions 8 and 10 for a cost of £93.4 million. Nevertheless, to expand the section between junctions 5–6 and 16–30 the Highways Agency proposed a Design, Build, Finance and Operate (DBFO) project in 2006.

The Design, Build, Finance and Operate (DBFO) public and private partnership model, as the Build

Transfer Lease (BTL), is a public service delivery type where the private assume the responsibility of providing the service during a considerable period of time (Alshawi, 2009)⁵ the particularity of the DBFO model is that the private partner assume the responsibility of the total finance of the project and operation during the concession period. Nonetheless, the government is the real owner of the project since the beginning of them. The private expect to recover the investment and to make profitability using the cash flow from the periodical payment from the government during the concession time. In the case of the M25, the Highways Agency used the DBFO model after analyze which private finance initiative (PFI) model offer the best value for money. At this point it is important to mention that the UK Highways Agency has a history on PFI projects, according to Paul Davies only in 2013 the Highways Agency has approved other 10 roads under the DBFO model (Davies and Carr, 2009)⁶.

The case of the widening of the M25 project is interesting because to make profitable and more stimulating the project to the private sector, The Highways Agency integrated into a

⁵ ALSHAWI, Mustafa. *Concept and Background to Public Private Partnership (PPP)/Private finance Initiative (PFI) UK experience*. <https://www.oecd.org/mena/47562550.pdf>

⁶ DVIES Paul and CARR John. "M25-Lessons and challenges". Published in PFI Infrastructure Report. 2009 <http://edition.pagesuite-professional.co.uk/Launch.aspx?EID=12a6ce9e-7b65-476c-b2f6-56547c3a017b>

single plan the widening project with the maintenance and operations of the highway, including motorways and trunks roads that intersected with the highway. Only in that way and with a concession period of 30 years the Agency will obtain the best value of the project as a private finance initiative. Nonetheless, according to Paul Davies and John Carr it was not clear how the financial market would assume and could be interested in one of the most expensive DBFO project at the time, in this issue the financial sector demand as a prerequisite that in first place the Highways Agency will include a clause of compensation in case of termination due default. In the second place, the demand risk of the project should be assumed by the public partner (Davies and Carr, 2009). On the other hand and considering the contractor's capacity, as well as, the congestion impact of the project, this was divided into four sections and the price will be fixed only in the case of the initial sections, and the other will be built up by the DBFO company, according to the time of the beginning of the construction and the experience of the initial sections.

The M25 was the first DBFO in UK where, because the size of the project, the bidders only had to submit their funding plans for the initial sections; this was because the Agency found that keeping the commitment fees in a long term could affect negatively the value for money of the project. Nevertheless, the Bidders had to submit evidence of the funding plans, and also include supports from the potential senior funding adviser.

In June of 2008 the project was given to the consortium "Connect Plus" with the HSBC as a financial adviser; however it was not clear that the commercial bank will be able to assume the total cost of the project, so the public partner had to prepared to provide up to £ 500M of senior debt itself as a co-founder. Even though, at the end of the period, this

public found was not require, it provides a sign of commitment from the public sector that that generated trust in the project by the financial sector and acceptable risk levels. These experiences were really important for the Agency and for the UK government in general because it was the beginning of Treasury's new infrastructure finance unit (TIFU), figure that since then it has been using in many new projects in U.K.

In the end, the project was a success after many negotiation hours with different actors who guaranty the necessities founds. The agreement included the participation of 16 commercial banks, which provided £700m of commercial bank debt and a £215m EIB guarantee. Also a £185m unguaranteed EIB structured finance facility. Finally, the partnership contract included a "mechanism whereby some of the cash not needed for debt service is rebated back to the government. On base case assumptions, £170m will be rebated back to the Highways Agency over the life of the contract" (Davies and Carr, 2009).

To conclude this section it is important to mention that this particular project has been the target of many critics, most of the argued that the cost of the PPP project was higher than if the project would be done only by the public sector. However, the magnitude of the project and the particular financial system are an interesting example of success in a big transportation infrastructure project where the private partner assumed the construction risk and the government the operational. This experience could be interesting in cases where an infrastructure requirement exists but the market will have not any interest at least that the government plays an active role as a partner. This experience also teaches us about the importance of strongest public institutions that guarantees acceptable uncertainty levels, as

well as a legal security frame, as a way to attract private investors in public infrastructure projects.

FROM A COMPARATIVE PERSPECTIVE: M-25 AGAINST COLOMBIA

The use of the model followed by U.K in the M-25 could represent an interesting alternative for the Colombian government in the way to achieve the transportation infrastructure development in those areas who have been affected by the conflict.

Consequently, it is necessary to analyze from different perspectives the strongest, weakness, opportunities and threats that a model like this would face if it would be implemented in the Colombian case.

Strongest

Though Mexico, Brazil and Chile, Colombia is part of the biggest economies in Latin America. Therefore, the country has been developing policies to attract investors, contending with their pars in the region. Additionally, after the peace agreement in 2016, the national government has settled new policies to improve the investment in those regions of the country whose had been affected by the conflict, most commonly known as ZOMAC. So in these days, Colombia has one of the best investment environments in the region and perhaps one of the strongest issues from a comparative perspective.

In 2017 with the decree 1650 the Colombian government created the Most Affected by the Conflict Zones (ZOMAC), where the government planned to give tax benefit and technical

support to those companies whose move there and develop their economic activities in the area. The main propose of the initiative is to generate employment and economic development in those areas who have been affected by the violence during more than 50 years. According to the finance minister at the time Mauricio Cardenas “There are 344 municipalities that will have a faster way to development, facilitating the arrival of different companies thanks to the attractive tax benefits. The most important thing: it will not only be for the agricultural sector. They will be able to set up businesses in commerce, transport services, construction, real estate activities, tourism, education, health, workshops, dealers, telecommunications” (Portafolio, 2017) ⁷. Hence, according to the decree and to the law 1918 of 2016, in these areas, the discount in the income tax could be around 50% in the case of big company and almost 100% to small and middle companies.

On the other hand, and in the way to achieve the same goal of attracting private investment, the central government with the law 935 of 2005 created the figure of the legal stability contracts (CEJ) in the country. The idea of this new tool is to guarantee to the investor the stability and the safety of their inversion. So, the investor has to determinate the most important norms or regulation frame, whose definitely will affect their investment and the government, will guarantee that if the norm is modified they will apply the norm that was guaranteed under the CEJ, during the validity of the contract, which can be between 3 to 20

⁷ PORTAFOLIO. ¿Cómo acceder a beneficios tributarios a través de las ZOMAC? (How to access tax benefits through the ZOMAC?). October 10 of 2017. <http://www.portafolio.co/economia/que-son-las-zomac-y-como-beneficiarse-de-ellas-510498>

years (Procolombia, 2017)⁸. The investment amount has to be equal or higher than seven thousand and five hundred (7500) current minimum monthly salaries.

This type of contracts provides to the investor legal stability and security, but at the same time, the Colombian governments ensure the investment in the country and also attract new direct foreigner investments. Those achievements are possible without affecting the independence and the possibility of the legislative to modify or create new ordinary laws in the future, just provide the possibility of exception in particular cases according to the CEJ. Until now, most of the norms that have been stabilized have been directly related with tax stability followed by those related with the customs regimen (Guzman, page 07)⁹.

Weakness:

The case of the M25 showed the importance of a strongest public institution as an important tool to generate confidence and attract a private investor. The experience and knowledge of the UK Highway Agency made possible the structuration of one of the most important DBFO project in Europe. It is important to remember that the technical and financial condition of the project, particularly the issue related with the financial plans where the bidders only have to submit the plan that only included the funding for the initial section of a big project of four sections (Davies and Carr, 2009)¹⁰, made imperative that

⁸ PROCOLOMBIA. Contratos Estabilidad Jurídica (Legal Stability Contracts). <http://www.inviertaencolombia.com.co/zonas-francas-y-otros-incentivos/38-zonas-francas-y-otros-incentivos/zonas-francas-y-otros-incentivos/92-contratos-estabilidad-juridica.html>

⁹ GUZMAN, Andrés. Contratos de estabilidad jurídica en Colombia. Análisis de la ley 963 de 2.005 (Contracts of legal stability in Colombia. Analysis of law 963 de 2.005). <http://190.242.62.234:8080/jspui/bitstream/11227/1229/1/Ensayo%20Estabilidad%20Jur%C3%ADdica%20Anderson%20Marrugo%20Guzman.pdf>

¹⁰ DVIES Paul and CARR John. "M25-Lessons and challenges". Published in PFI Infrastructure Report. 2009. Pag. 3. <http://edition.pagesuite-professional.co.uk/Launch.aspx?EID=12a6ce9e-7b65-476c-b2f6-56547c3a017b>

the institution in charge of evaluating the bidders and the project had to have minimum qualification in terms of experience, knowledge, independence, and transparency to make the project viable and attractive for private investors . Since April of 2015, the Highway Agency evolved into a public company known as Highways of England, with this change the governments pretend to provide more autonomy and efficiency to the way how the government administrated and improve their national Highways.

In the Colombian case, the National Infrastructure Agency (ANI) plays the same role as Highways of England. Created in 2011 as a decentralized institution, the ANI has the objective to plan, evaluate, design, built, operate and administrate public projects as well as public-private partnership projects in transportation infrastructure. The idea of the institution was to create a strongest and independent agency that improve and contribute to overcoming the lack of efficiency in terms of transportation infrastructure in Colombia. Nonetheless, since their creation, the institution has been a victim of corruption, lack of efficiency and misadministration. Consequently, the former and first president of the ANI, Luis Fernando Andrade, has been facing disciplinary and legal accusation of corruption in the middle of a scandal with the multinational Odebrecht, who admitted to paying bribes as a way to get the build contract of one of the most important transportation infrastructure projects in Colombia (El Pais, 2017)¹¹.

¹¹ EL PAIS.COM. "Imputarán cargos a Presidente de la ANI en caso Odebrecht" (They will charge charges to the President of the ANI in Odebrecht case) 27th July of 2017.
<http://www.elpais.com.co/colombia/imputar%C3%A1n-cargos-a-presidente-de-la-ANI-en-caso-odebrecht.html>

Unfortunately, this is not something new, in fact, the ANI appear in 2011 as a way to replace the former institution known as Concessions National Institute (INCO) who were qualified as a “cave of thieves” by the Colombian president Juan Manuel Santos (EL HERALDO, 2017)¹². The INCO was created in 2003, by the government of Alvaro Uribe Velez, the main objective of the institution was to be in charge of funding the planning and execution of road, river, sea, rail, and port transportation projects in the country, however the lack of efficiency and quality of many of the projects who were developed by the Institution made that the Santos government with the support of the Andina Development Corporation (CAF), transform the institution into the new ANI. Nonetheless, in both situation, the agency has been an appendice of the presidential office, without the necessary independence and technical support to reduce the corruption and lack of efficiency risks. Consequently, the weakness of the institution necessary would increase the risk for the private investor, so probably the complex structure of the financial plan of a project like the M25 widening could be unattractive to the private financial partner.

The lack of Independence of the ANI probably would not be the strongest weakness if the corruption index would not be high. However, according to Transparency International, Colombia was ranking in 2017 in the 96th place of 180 countries with a score of 37, below other parts in the region as Uruguay (23), Chile (26), Costa Rica (38) and Argentina (85). According to Fernando Cepeda, who has been studying the phenomenon of corruption in

¹² EL HERALDO. “Santos dice que con la ANI desapareció la “cueva de ladrones” que era el Inco” (Santos says that with the ANI the “cave of thieves” that was the Inco disappeared) March of 2017. <https://www.elheraldo.co/bolivar/santos-dice-que-con-la-ani-desaparecio-la-cueva-de-ladrones-que-era-el-inco-333545>

Colombia, the main causes of the corruption in the country are Inefficiency, lack of control and cultural issues (Cepeda, 1997)¹³.

Cepeda argues that perhaps the most important cause of the corruption is the inefficiency of the State to provide services to the society, so it generates incentives in the people to offer money to the public officer as a way to receive easily the service. The author claims that this inefficiency is originating in the deficiency or even in existence of planning systems and control process, as result, it is harder or even impossible to determinate corruption actions and their authors. As a second issue, the academic put the light in the lack of control that each individual entity who generally when an incident happens, assume the responsibility but almost never take direct actions to the public officer, so is the institution who has to assume the penalties directly. It is because of this last point that the state has paid millionaires amounts by the concept of reparation or indemnities, many of them because of an individual bad decision taken by public officers.

Finally, it is necessary to mention the incidence of the cultural issues in the corruption phenomenon. The faster economic development of the country since the beginning of the new millennium, plus the rise of a culture attached to illegal economies since the decade of the 80's, made that culturally the society appreciates and recognize the money factor as an index of success and social status. Consequently, it is more important the money that the way how the people get the money, so the social cost of the corruption and the illegality as well it could be less than the cost of life without money. In this way is socially accepted the

¹³ CEPEDA, Fernando. La Corrupción en Colombia (The corruption in Colombia). Tercer mundo editores. 1997

influence peddling to obtain a job in the public sector, as well as the use of public funds in private interest (Semana, 1994)¹⁴.

Opportunities:

One of the lessons from the M25 case is the importance of the financial institutions in any type of PPP Project, particularly in the DBFO model, where the private assume completely the financing of the project. That is why, even with strongest financial institutions, in the case of the M25 the government had to show their witness to sell public debt bonds as a way to capitalize the bidders, in case of it would be necessary. However it was not and the private sector was able to finance the project, showing the strongest of the financial system in U.K as well as the confidence in the profitability of the project.

In the Colombian case, even though it is necessary to keep the proportions, the financial sector has been living an important growth since the decade of the 90'S of the last century, so the area is birthing one of the best environments in decades. According to the Colombians Financial Supervision Institution in May of 2017 the assets of the financial sector were valued in \$(COP) 1,502, billions (b), which means a real annual increase of 8.2%. That made possible that at the end of the month the economy reaches an assets/GDP index of 171.09%. The report of May of 2017 form the Colombians financial supervision institution show an increase in the savings in middle and long term keeping the growing of the deposits, particularly those knows as CDT (Certificate of Term Deposit), mainly those with a maturity of one year or more. The CDT presented an annual real increase of 10.9%,

¹⁴ SEMANA. "Las Causas de la corrupción" (The causes of the corruption). September of 1994. <http://www.semana.com/nacion/articulo/las-causas-de-la-corrupcion/23515-3>

closing the month with a balance of \$(COP) 158.38 b. At the same time the balance of savings accounts and currents accounts close the same term with a balance of \$(COP) 158.40 b and \$(COP) 47.0b respectively.

In the middle of 2017, the utility from Banks and financial institutions was almost \$(COP) 3.7b, a situation that has been supported in 61.5% by the total marginal interest rate. The positive balance of the financial institutions affects directly the conditions under this establishments offer financial services. Another important financial indicator is strongest of the pension and service funds. According to with the same report the amount of the resources whose had been administrating by this funds was around \$(COP) 236.7b, showing an increase of \$(COP) 35.5 b according to the same period of one year before, that means that the profitability of this founds was higher than the minimum required by law (Super Intendencia financiera, 2017)¹⁵

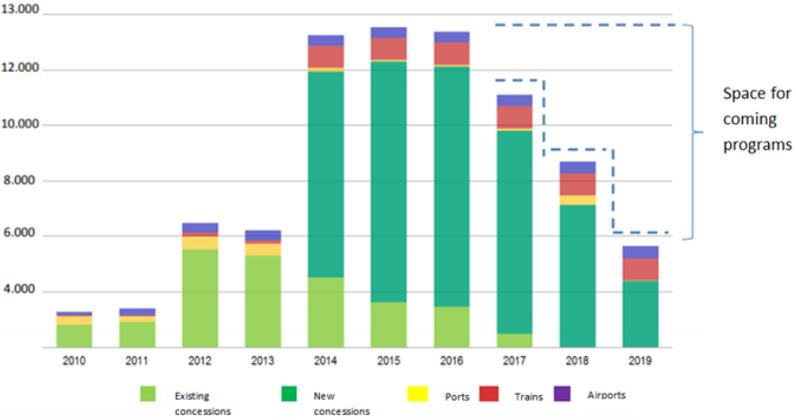
As well as the predecessor, the insurance sector exhibited a positive behavior, expecting an annual growth rate of 6.1% in the amount of the insurances policies. Consequently the utility of the sector was around \$(COP) 875.1 mi million (mm) at the end of May of 2017, most of them from the life insurances companies, followed by general insurances company and capitalization societies with records of \$(COP) 785.5 mm, \$(COP)77.1mm and \$(COP) 12.2mm respectively .

¹⁵ SUPER INTENDENCIA FINANCIERA DE COLOMBIA. Actualidad del sistema financiero de Colombia (Current financial system of Colombia). May of 2017

Another important issue to be considerate, taking as an example the case of the M25 is the necessity to improve the transportation infrastructure. At the middle of the 90'S was imperative to expand the M25 Highway, as a way to increase the efficiency and the competitive of one of the biggest cities in Europe, also the proximity of the Sumer Olympic Games of 2012, to be celebrate in London, was another factor that made this project took an important place in the national agenda. Backing to the Colombian case, the infrastructure development has been taking an important status in the governmental priorities since 2002. Nonetheless after the peace agreement in 2016 the government has been focusing even more in the necessity to make more efficient the shipping infrastructure in the country.

The lack of transportation infrastructure in Colombia has been a big issue since the second half of the last century but was only at the beginning of the 2000'S when the central government starts to focus their interest in this area, taking almost \$(COP) 6b in transportation infrastructure investment in 2011, equal to 1% of the Colombians GDP. However, according to National Infrastructure Agency (ANI), the government planned to increase the investment gradually, expecting to achieve 3% of GDP in 2014, and \$(COP) 8, 5 b in 2018. Recently the emphasis has been in many motor roads, knows as the four generation roads (4G), where the government pretends to achieve the territorial integration and to promote the competitiveness among the country. Additionally, in the National development plan 2014-2018, the government highlighted the importance of the private inversion as well as the public private partnerships as a way to overcome the infrastructure deficit.

The ANI has insisted on the necessity to maintain the investment level as a way to achieve the transportation infrastructure competitive goal. Consequently, the institution shows an



increase in the space for future investments.

The graphic below shows the projection of the average levels of investment in transportation

Graphic: Levels of investment
Source: National Infrastructure Agency (ANI)

infrastructure until 2019, there is clearly an annual progressive increase of the space for coming programs, plus a regulation frame that allows the PPP from private initiative, seems that it is harder to find another better environment of opportunity for a private investment. Also, it is necessary to remember that according to the national development plan, the infrastructure development plays an imperative role in the peace consolidation policy. Therefore, the government project to develop a rural logistical platform which will integrate the productivity chain in rural areas with the national and international distribution and commercialization chain, so in that way the local economies will become stronger and more competitive. (DNP, 2014)¹⁶

Threats:

¹⁶NATIONAL PLANNING DEPARTMENT (DNP). National development plan 2014-2018 (Plan Nacional de desarrollo 2014-2018). Colombians presidency. 2014. Page. 195

The Public and Private Partnership model has been used in Colombia since the beginning of the last decade of the past century; however, it was not until the law 1508 of 2012 when the government created a specific legal framework to regulate and reduce the risk levels to the PPP investors. In the case of the M25, the experience of the Highways Agency and the Bidders as well in issues related with the design and the building process played an important role in the risk control process in this particular project. So when we analyze the Colombian case, even though we have many cases of successful experiences, there also are some situations where it is not clear the ability of the Colombian engineering to be a success in projects whose require high levels of engineering and design innovation.

Before to continue, it is important to mention that the objective of this section it is not to evaluate the engineering industry in Colombia. Nonetheless, from the perspective of the PPP investor as well as the Public Policy building it is important to analyze some facts that could represent a threat in the middle and long term and that is why we will consider tree particular cases that could put a shadow on the efficiency of the infrastructure development in Colombia: First the case in Monteria in 2014, second the case of the bridge in the 106 street in Bogotá and finally the case of the bridge of “Chirajara” in 2018.

In August 04th of 2014, the structure of the under-construction bridge falls down causing 01 death and 27 injured workers. The bridge was part of the transportation project “Cordoba-Sucre”. This is one of the most important transportation infrastructure projects in the Caribbean region, particularly in the departments of Cordoba and Sucre. The project was awarded in 2007, by the national government, to a private society called “Autopista de la Sabana SAS” under a partnership model who transfer to the private the responsibility

of build, design, finance, and operation of many roads to connect this two departments in the Caribbean region. The project included the construction of 120km of 4 lines highways and the rehabilitation of 250km of motor roads in the region. The incident occurred on a bridge that pretends to provide easy access to the airport close to Monteria, the capital city of Cordoba's department. Nonetheless, according to a regional journal report, the accident occurred because of miscalculations of the engineers. So, one of the pillars of the structure falls down because it was unable to support the weight of the reinforced concrete (El Herald, 2014)¹⁷.

The second case occurred in February of 2015 in Bogotá, Colombia's capital city, where a pedestrian bridge that pretend overpass a 4 lines avenue fall down during the resistance test, causing 42 injured people, including many soldiers who were used to exam the bridge resistance. The Colombian Army was the owner of the project, who's hired a construction company, known as "Constructec S.A" to build the pedestrian bridge with a cost of \$3.195 million of Colombian pesos (approx. US \$1 million). According to Javier Pava, Principal of the District Management Risk Institute (Instituto Distrital de Gestión del Riesgo, IDIGER), "at the time of the resistance test there was a displacement of the mast, which is the base of the eastern side, because there was an overvoltage in the bridge, that is, the tensors or cables with which the work was being done to sustain the bridge had an excess of force due to the load. That greater effort, apparently, caused the failure" (El Tiempo,

¹⁷ EL HERALDO. "27 heridos y un atrapado por caída de puente en construcción en Montería" (27 injured and one caught by falling bridge under construction in Montería). 04th August of 2014. <https://www.elheraldo.co/cordoba/se-cae-el-puente-de-los-garzones-en-monteria-161604>

2015)¹⁸. In other words, once again an engineer and design miscalculation caused the collapse of a bridge.

Finally and perhaps the most relevant case occurred at noon in January of 2018, in the 4 lines project highway between Bogotá and the city of Villavicencio in Meta's department at the Orinoquia's region. The bridge was part of a concession project known as "motorway Bogotá – Villavicencio" awarded to Conviandes, a company lead by The Aval Group, one of the most important financial groups in Colombia. The bidder has been ahead of the motorway between Bogotá and Villavicencio since August of 1994 when the INCO (Today National Infrastructure Agency ANI) transfer to the company the maintenance and operation of the motorway. Additionally, in January of 2010, the central government awarded to the same company the widening project of the highway from 2 to 4 lines. This widening project includes the building of 18 new tunnels, 42 new bridges and the construction of 33.8Km of 4 line highway.

The accident occurred in one of the bridges in a sector known as "Chirajara". According to Mexpresa, one of the project auditors, the fail of the structure was caused by a miscalculation during the design process, the auditor company mention that "there is a deficiency in the design of bracing system between tower columns in the direction change section" (Portafolio, 2018)¹⁹. Consequently, experts in the topic as Marco A. Hinojosa,

¹⁸ EL TIEMPO. ¿Por qué se cayó el puente peatonal de la carrera 11 con 103? (Why did the pedestrian bridge of race 11 fall with 103?). February 2nd of 2015. <http://www.eltiempo.com/archivo/documento/CMS-15182335>

¹⁹ PORTAFOLIO. "Un error de diseño habría sido la causa del desplome del puente de Chirajara" (A design error would have been the cause of the collapse of the Chirajara bridge).

from another auditor company, recommend making a safe demolition, which avoids the risk for both people and the surrounding structures (Portafolio, 2018). However, the construction company has argued the necessity of a second opinion about the topic and insisted in the importance of keeping and reinforce the existent structure.

At this point it is important to insist that objective of this thesis is not to evaluate the engineer quality in Colombia. Nonetheless, cases as those whose were explain before could be a threat, particularly to the private investor, whose probably will examine deeper the real capacity of the enginery before any invest in public infrastructure in Colombia, mainly in a BTL as well as in a DBOF project where the private assume the construction risk.

Another treat, that it is necessary to consider in this section in this section, is that most of the area, where the transportation infrastructure is needed, is part of the Colombian Amazonia. Consequently, many voices, as the Corporation for Sustainable Development of north and west of the Amazonia (Corporación para el Desarrollo Sostenible del Norte y el Oriente Amazónica CDA) has argued that the development of roads and transportation infrastructure will increase the deforestation and the colonization process in the area. In fact, the most emblematic case has occurred in the department of Guaviare, where the governor of the department has been insisting in the importance of expansion and rehabilitation of a motor road between the municipalities of Calamar and Miraflores.

The motor road of 138km in the middle of the jungle is the center of the debate between environmental organizations, like the CDA, and regional authorities. On one hand, the regional government argued about the importance of the infrastructure development for the citizen's social welfare, according to Ramiro Álvarez, Chef of public infrastructure development in the department of Guaviare, "Sending 1 ton of cargo by river costs \$ (COP) 300,000. By air, \$(COP) 1,500,000, and by land would cost \$ (COP) 180,000".²⁰ On the other hand, voices as Roberto Gómez, from the Natura organization, claim about the necessity of keeping the motor road, but unpaved, increasing the presence of the environmental police and other institutions who prevent the expansion of the deforestation process.

The motor road of 138km in the middle of the jungle is the center of the debate between environmental organizations, like the CDA, and regional authorities. On one hand, the regional government argued about the importance of the infrastructure development for the citizen's social welfare, according to Ramiro Álvarez, Chef of public infrastructure development in department of Guaviare, "Sending 1 ton of cargo by river costs \$ (COP) 300,000. By air, \$(COP) 1,500,000, and by land would cost \$ (COP) 180,000. "On the other hand, voices as Roberto Gómez, from the Natura organization, claim about the necessity of keeping the motor road, but unpaved, increasing the presence of the environmental police and other institutions who prevent the expansion of the deforestation process.

²⁰ CALLE, Helena. Tres carreteras que amenazan al pulmón más grande del planeta (Three roads that threaten the planet's largest lung). <https://www.elespectador.com/noticias/medio-ambiente/tres-carreteras-que-amenazan-al-pulmon-mas-grande-del-planeta-articulo-711757> September 5th of 2017.

STRONGEST	WEAKNES
<ul style="list-style-type: none"> • Private investor tax incentives in the most affected by the conflict zones (ZOMAC). • Legal stability contracts (CEJ) 	<ul style="list-style-type: none"> • Weak specialized and independent institutions, in particular the National Infrastructure Agency (ANI). • High corruption Index
OPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Strongest national financial system. • Political wiliness to invest in transportation infrastructure 	<p>Quality of Colombian engineering, design and innovation capacity.</p> <p>Environmental impact, particularly in the Amazonia region.</p>

RECOMMENDATIONS

In terms of public policy, it is harder to think in a new anti-corruption legal framework in the Colombian case, because in fact the country already has an important body of laws against the corruption issue, most of them following international norms and standards. According to the last report of the OECD, Colombia has made significant progress in implementing its anti-corruption framework (OECD, 2018)²¹ However, even though most of these norms exist in the paper, they have not been implemented and enforced. That could be explained by the fragility and lack of independence of the institutions who are involved in the policymaker process as well as those who are in charge of auditory and public resources control. Consequently, the efforts in terms of corruption should be focus on three significant points: strongest, independent and specialized institutions.

As it was mention before, the main institution who's supposed to be ahead with everything concern to the PPP projects it should be the ANI, but the institution lacks human capital with enough knowledge and the sufficient experience to manage and made more efficient the project making process. This could be explained because the selection process of the public officers in this area used to obey to political compromises more than to real professional requirements. So, the professionalization of the public officers following an accomplishment and career system could be an interest option to enforce the institution.

As a second point, the independence of the institutions is another issue that affect and contribute to the higher corruption index in the country, because even though the country has many institutions in charge of the vigilance and control of public resources as the

²¹ OECD. "Phase 2 follow-up report on implementing the OECD anti-bribery convention in Colombia". February of 2018.

Contraloria (fiscal control) and the Procurator office (disciplinary vigilance of public servants), the selection of the officer ahead of those institutions generally is affected or influenced by a powerful presidential system. Consequently, it is very common that these control institutions lose independence and efficiency and can be condescending and even neglect with their regulation and supervision functions. This scenario is not better in the case of institutions like the ANI who is under the control of the presidential office, so their budget and human resource depend on the political will of the executive power.

Finally and directly related with the points mentioned above, a stronger institutional frame requires more specialized institutions, in the case of Colombia the PPP projects necessary involve the active participation of the ANI and National Committee for Social and Economic Policy (CONPES), however the last one also depends on the head of the executive, so in terms of corruption control it is limited their actions with more emphasis on macroeconomic management and works more as a formality. The experience of the M-25 showed the importance of a technical institution whose experience and credibility generate confidences into the potential investors.

CONCLUSIONS

- The M25 Orbital Motorway is one of the most interesting and meaningful cases where a transportation infrastructure project was financed build and operated by the

private sector, under a public private partnership model. This experience teaches us the importance of a stronger public partner as a warranted who attracts and reduces uncertainty levels for the private investor. Also, the M25 experience showed the necessity of strongest public institutions, as the UK Highway Agency. The role of this institution was vital in all of the phases of the project, particularly during the bidder selection and in the project design as well.

- In terms of threats, the Colombian case has showed two big challenges. On one hand, the environmental impact could be a big issue, particularly because most of the most affected by the conflict zones (ZOMAC) are located in the amazonic area, consequently any project in this area has to minimize their environmental impact, situation that in most of the cases might increase the cost of the project. On the other hand, we are facing a difficult in the credibility of the Colombian enginery; cases like the bridge of “Chirajara” or the bridge in Monteria could scare away private investors and increase transactions costs.
- As it was mention before the institutions play an important role in the public private partnership models, consequently the relative instability of the Institutions in charge of infrastructure projects in Colombia, like the ANI (before INCO) is a comparative weakness, because the private partner would have doubts about the security and profitability of any project in the middle and long term. Additionally, the corruption structure in the country and the low transparence levels reduce the efficiency of the public system and increase the transaction cost for the private as well as for the public partner.

- In this context and as policy recommendation, it is necessary to remember that one of the most important tasks that the government has to achieve in the way to make more efficient and attractive the investment in public policies by private partners is the reinforcement of the institutions, particularly the technical fortification and the independence of the ANI. Additionally and even though many studies have agreed that the community participation not necessary will reduce the corruption levels (J-PAL, 2008)²², it is necessary to involve the community in the policy build process as well as in all the stages of the public private partnership project.
- Finally, it is a fact that every peace process has to be followed by a big investment because in most of the cases the devastation of the war affects politically and economically to the society who has been affected by the conflict. The Colombian case is not the exception, the lack of investment and presence of the central government in those areas who have been affected by the war and the deficiency of infrastructure development supported the increase of illegal economies. Therefore, it has to be a priority for any government to close this infrastructure gap. In this context, and considering limited public resources in the short term, public and private partnerships models like de DBFO and BTL seem as an interesting alternative to support to the central government in these post-conflict scenarios. And experiences as the M-25 in U.K showed that these types of PPP projects are possible even in big infrastructure projects. Nonetheless, in the Colombian case,

²² The Abdul Latif Jameel Poverty Action Lab (J-PAL). Routes to reduced corruption. J-PAL Policy Briefcase, March 2008

issues like the corruption and the management of the environmental impact could increase the risks and the cost of any project reducing their attractiveness for the private partner. So, in the Colombian case, it is necessary to improve the public institutions (like the ANI) and design a public mechanism to support the private investment in infrastructure projects, the Treasury's new infrastructure finance unit (TIFU) in U.K could be a good example of those mechanisms.