

# Assessing the Quality of Public Investment Management: Case Study of a Colombian Oil-Rich Municipality

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## Abstract:

The emerging literature on public investment management (PIM) pays particular attention to the assessment of country-level investment systems. Consequently, most of the data and recommendations address national level challenges. Less is known about the topic at the subnational level. This paper contributes to fill this gap of the literature through a case study of a Colombian municipality: Arauca. The level of competition in public bidding processes undertaken by the mayoralty of Arauca was muted between 2005 – 2015. Arauca exhibited an extremely high level of single-bidder-ratio (96%) and a very low average number of bids submitted per open tendering process (1.05). The paper explores the factors and processes that contributed to explain this outcome. Two specific shortcomings in the implementation stage of investment projects in Arauca municipality were identified: lack of transparency in public management and serious violations to integrity of procurement processes. Furthermore, the main source of income of Arauca's municipal government, oil revenues, also appeared to be associated with processes that hindered the implementation of public investment projects.

**Keywords:** public investment management, public procurement, management of natural resource revenues, oil royalties, subnational finances.

## Introduction

Public investments undertaken by governments can contribute to the economic growth and the development goals of a country or region.<sup>3</sup> Conversely, the lack of such investments may

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<sup>3</sup> The macroeconomics literature frequently defines “public investment” in a narrow way, that is, in terms of capital expenditures that aim at generating physical infrastructure (e.g. roads, hospitals, aqueducts). However, this paper follows a broader definition of public investment that also includes “soft” infrastructure such as human capital and innovation development (OECD 2014a). This definition is deemed to be suitable for this case study because the Colombian national government's public accounting classifies as capital expenditures the investments on “hard” and “soft” capital.

hinder the solution of pressing economic bottlenecks, for example, when this deficiency prevents governments from providing public goods. However, the literature on economic growth questions the assumption that public investment always fully translates into capital. The reason: full public sector efficiency and efficacy cannot be assumed (Berg et al. 2013; Grigoli and Ley 2012; Pritchett 2000; Warner 2014). Indeed, different types of problems in public investment systems, ranging from management weaknesses to sheer corruption, partly explain low economic returns of public investments (Dabla-Norris et al. 2012; Haque and Kneller 2015; Pritchett 2000; Rajaram, Le, Kaiser, et al. 2014; Romp and Haan 2007; Warner 2014).

In Colombia, the *Commission on Public Expenditures and Investment*, a task force of experts appointed by the national government, recently pointed out that public spending was less efficient than in other Latin American and OECD countries (Bernal et al. 2018, 78). Additionally, the WEF's *Global Competitiveness Report 2017-2018* scored Colombia's government efficiency in spending public revenue with 1.9 points over 7.0 and ranked it in place 129 over 136 countries (WEF 2017).<sup>4</sup> Moreover, the Commission's report concluded that "it is possible to improve public spending in Colombia, in efficiency and effectiveness" (Bernal et al. 2018, 15).<sup>5</sup> Similarly, the *National Report on Competitiveness (2017-18)*, published by an independent non-profit organisation, also recommended to improve the efficiency of public expenditures in Colombia (CPC 2017).

Most of the analysis and recommendations in the mentioned reports were based on the processes implemented at the national level. However, the bulk of the public investment resources are not directly spent by the national government: the Colombian subnational governments manage more than 70% of total public investment (OECD 2014b, 114).<sup>6</sup> Additionally, the subnational governments of Colombia carry out public procurement processes that represent 43.7% of the total resources spent by the public sector (Bernal et al. 2018, 140).<sup>7</sup>

The empirical evidence suggests that the quality of public investment management in Colombia at the subnational level, particularly in municipalities, is sub-optimal. The seminal study of Meléndez (2015, 110) on public procurement in Colombia, for example, found that in 2014 public biddings linked to infrastructure projects on average received only 1.37 bids when conducted by municipalities and 4.48 when carried out by departments.<sup>8</sup> Furthermore, the study

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<sup>4</sup> However, the scoring and ranking of WEF's report is based on an opinion survey that measures the perception on government spending efficiency, rather than objective indicators of performance.

<sup>5</sup> Similarly, two years before, the "Expert Commission for Fiscal Equity and Competitiveness", also appointed by the national government, recommended the elimination of inefficient public spending (Bonilla, Ricardo et al. 2015).

<sup>6</sup> This figure is close to the average share of public investment undertaken by subnational governments in OECD countries (OECD 2014a, 4).

<sup>7</sup> The share of the national government in the value of the total procurement processes is 37.2% and the remaining resources are spent in social security (Bernal et al. 2018, 140).

<sup>8</sup> The report published by Meléndez (2015) was solicited by the *Colombian Chamber of Infrastructure* (CCI). In a similar vein, the *Society of Colombian Engineers* (SCI) published data on open tendering processes in Colombian municipalities during 2014 and reported that only 61 (mostly capital cities) had an average number of

surveyed directors from 390 engineering services companies about their perception on the transparency of public procurement processes. The research reported that 14% of the respondents considered that the processes at the municipal level were transparent, at the departmental level 19%, and at the national level 34% (Meléndez 2015, 6–12).

Most of the research on the topic in Colombia has been commissioned by business associations or carried out by national oversight authorities. Aside from the prolific literature on the impact of royalties at the subnational level<sup>9</sup> and on the efficiency of public expenditures funding by specific national government transfers (SGP)<sup>10</sup> (Galvis 2014), little attention has been paid to the quality of subnational public investment management (PIM).

The quality of PIM is understood in this research as the efficiency and effectiveness of the decision-making processes and institutional arrangements to deliver public investment projects and programmes.<sup>11</sup> The public investment cycle may be decomposed in four basic stages: project appraisal, selection, implementation and evaluation (Dabla-Norris et al. 2012). This paper focuses on the third stage of the investment cycle: the processes carried out by municipal governments to implement investment projects.

The aim of this paper is to contribute to the emerging literature on PIM and, more specifically, to the scholarship on the competitiveness of public procurement processes. Furthermore, this account seeks to shed light on a pressing policy challenge in Colombia: improving the quality of PIM at the subnational level. The paper identifies and discusses the factors that influence the quality of PIM at the subnational level (the dependent variable), with an emphasis on the institutional arrangements and processes linked to the investment of resources.

A case study approach was used to examine the processes implemented by the mayorality of a Colombian municipality, Arauca.<sup>12</sup> More specifically, this paper examined the public procurement processes carried out by the mayorality of Arauca to implement its investment projects and programmes, which were mostly funded with oil royalties. Qualitative and quantitative data was triangulated to carry out a process-tracing analysis, covering the period from the late 1980s to mid 2010s. The qualitative data was collected during fieldwork that was carried out in Bogotá and Arauca in 2016. As it is explained more thoroughly in the research

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bids per public bidding process that was equal or above to 2.0 (SCI 2015). The same report also concluded that the open public bidding processes carried out by departments received 3.3 bids on average in 2014.

<sup>9</sup> For example, Benavides et al. (2000), Candelo et al. (2008), Perry & Olivera (2010), Muñoz and Núñez (2011), Rojas (2014), Martínez (2017), and Gallego, Maldonado and Trujillo (2018). However, there are at least two works that explored the efficiency of public expenditures funded by oil royalties: Armenta, Barrero & Prieto (2012) and Ardanaz & Tolsa (2016), who used data envelopment analysis to examine the relative efficiency of municipalities.

<sup>10</sup> The acronym stands for “Sistema General de Participaciones”.

<sup>11</sup> This definition is based on the literature on PIM (IMF 2015; Commission 2012; OECD 2014a; Dabla-Norris et al. 2012; Rajaram, Le, Kaiser, et al. 2014).

<sup>12</sup> Whenever I mention Arauca I am referring to the municipality, unless I explicitly explain that I am referring to Arauca department (established by the 1991 Constitution). The department is currently composed of seven municipalities and has a total area of 23,818 km<sup>2</sup>.

design section, Arauca municipality is an extreme case of poor performance in the midst of abundance of revenues.

Based on data from 310 public bidding processes carried out by the mayoralty of Arauca between 2005 – 2015, I measured the competitiveness of the public procurement processes. Arauca exhibited an extremely high level of single-bidder-ratio (96%) and a very low number of bids presented per open tendering process (1.05). Furthermore, this paper argues that three factors contributed to explain the shortcomings in the implementation stage of investment projects in Arauca municipality: (i) transparency in public management, (ii) integrity in procurement processes<sup>13</sup>; and, (iii) the paradox of plenty.<sup>14</sup>

There is at least one alternative explanation for the low-level competitiveness in the procurement processes that should be considered: the isolation of the municipality and the size of its market. The extremely poor road infrastructure of Arauca and the small size of its market could make it less attractive for potential suppliers. However, rigorous examination of this alternative explanation requires further research.

This paper has four sections. The first one presents a synopsis of the relevant literature and the gaps of the scholarship. The second section, briefly explains the research design, the data sources used to address the research questions. Additionally, the section offers a brief description of the Arauca's background. The third section presents the main findings of the case study. The section is divided in two parts: i) an assessment of the level of competitiveness of the mayoralty's procurement processes, and ii) the discussion on the factors and processes that appeared to influence the quality of PIM in Arauca. The paper finalises with concluding remarks on its main findings, policy implications, limitations, and future avenues of research.

## 1. Literature review

### 1.1 The emerging literature on PIM

Over the last two decades, the literature on the association between public investment and growth identified a gap between “public investment costs” and the “value of public sector capital”.<sup>15</sup> In other words, public investment does not always fully translate into capital.

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<sup>13</sup> Integrity in public procurement may be defined through positive or negative approach. On one hand, it refers to the use of public funds “according to the intended official purposes, ... in line with public interest.” (OECD 2009, 19). On the other hand, integrity is opposed to misconducts that take the form of corruption, fraud, collusion, conflict of interest, abuse or manipulation of the procurement processes.

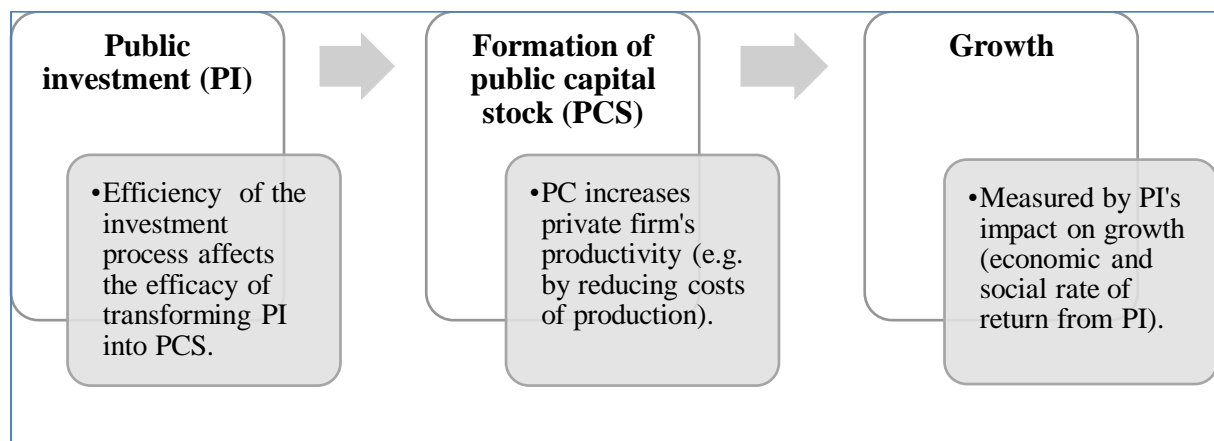
<sup>14</sup> I borrow this term from the literature on the political economy of the resource curse. More specifically, from Karl's (1997) influential book “*The paradox of plenty*”, that traced the case of Venezuela and compared the trajectory of several oil-rich states after the 1970s bonanza. Her study focused on the interaction between political institutions, incentives and power relations, and economic development. She argued that oil windfalls had the power to shape state institutions and policy decision-making frameworks in a way that was conducive to unsuccessful developmental results.

<sup>15</sup> See, for example, the seminal paper by Pritchett (2000).

Furthermore, the scholarship suggests that there is differential government efficiency or efficacy in public spending.<sup>16</sup> Pritchett (2000), for example, used four (indirect) estimates of investment efficacy and reported heterogeneous results among countries and between the public and private sectors.<sup>17</sup>

More recently, econometric based studies found that the quality of PIM had an incidence on the contribution of public capital to the economy's productivity and economic growth (Chakraborty and Dabla-Norris 2011; Gupta et al. 2014; Rajaram, Le, Kaiser, et al. 2014). In short, the literature suggests that the quality of PIM mediates the impact of new public capital on an economy. For example, Gupta et al. (2014) reported empirical evidence –obtained through a panel regression analysis of 52 low and middle income countries– suggesting that public investment management processes (particularly project selection & implementation phases) are an important determinant of the formation of public capital and growth. Grigoli and Ley (2012), Warner (2014) and IMF (2015) also reported empirical results that support this claim. A simplified theory of change between public investment and growth, based on the mentioned literature, is depicted by **Figure 1**:

*Figure 1– Theory of change underlying public investment and growth*



Source: Elaborated by the author based on Chakraborty and Dabla-Norris (2011), Gupta et al. (2014), and Rajaram and Frank (2014)

These findings from the literature on public investment and economic growth begged for additional research on how to improve public investments systems. Enhancing the efficiency

<sup>16</sup> The literature that explores the effects of public investment processes on capital accumulation refers to “public investment efficiency” as the “efficiency with which public investment is turned into productive physical capital” (Gupta et al. 2014, 165). In a broader way, the European Commission (2012) defined the quality of public expenditures in terms of the efficiency with which public funds are transformed into outputs that benefit citizens. In a similar vein, Pritchett (2000) referred to “public-sector efficacy” and “government investment efficacy” when he studied the variation –among countries– of the impact of public-sector investment on public sector capital. Similarly, Grigoli and Ley (2012, 3), referred to the “quality of public spending” as “the government’s effectiveness in transforming resources into socially valuable outputs.”

<sup>17</sup> For instance, Pritchett (2000, 368) compared data on “ex post economic rates of return on World Bank—financed investment projects” and “the cost per kilometre of constructing similar roads in various countries derived from World Bank project documents”.

and the efficacy with which governments turn resources into specific socio-economic outputs (e.g. public goods/services coverage or productivity) and outcomes (e.g. growth, citizens' wellbeing) is a key policy challenge for attaining development goals.

The emerging literature on public investment management (PIM) attempts to address this government challenge. The underlying rationale of the efforts undertaken by international organizations like the International Monetary Fund (IMF), the World Bank (WB), the Organisation for Economic Co-operation and Development (OECD) and the European Union (EU) to improve PIM is that the economic and social impact of public investment depends on the efficiency of public investment processes (Commission 2012; IMF 2015; OECD 2014a). In the same vein, IMF and WB researchers have recently explored how to measure and improve the efficiency of public investment processes with the objective of increasing the impact of these investments.

Let's start by reviewing what PIM means and how the procedures proposed by the literature to measure it. Dabla-Norris, Brumby, Kyobe, Mills, and Papageorgiou (2012) were the first to construct an index that attempted to measure the efficiency of the investment processes, named the *Public Investment Management Index* (PIMI). The PIMI is a composite index aimed to capture "the institutional environment underpinning public investment management across four different stages: project appraisal, selection, implementation, and evaluation" and it was tested with data of 71 countries (Dabla-Norris et al. 2012, 235).

To design and build the PIMI, the researchers dissected the cycle of public investment to identify, in each of its stages, the processes and institutional environment that may yield efficient outcomes.<sup>18</sup> Dabla-Norris et al. (2012, 237) examined the "quality and efficiency of the investment process across four consecutive stages: project appraisal, selection, implementation and evaluation." PIMI evaluates and scores each phase of the investment cycle and generates an aggregate score that is a simple average of the scores of the four stages. In each of the stages they aimed to capture "the basic processes and controls that are likely to yield efficient public investment decisions, while recognizing the role of institutions, capacity and incentives" (Dabla-Norris et al. 2012, 240). The index is based on 17 questions about the investment processes and its institutional arrangements that were coupled with defined parameters and score methodologies to respond each question.<sup>19</sup>

To evaluate public investment systems Dabla-Norris et al. (2012) propose indicators that require different degrees of analysis, from simple tick boxing to assessing the quality of cost-benefit studies. PIMI assesses procurement quality through two main indicators: "the extent to

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<sup>18</sup> Dabla-Norris et al. (2012) implicitly define the quality of public investment in terms of the efficiency of the public sector in transforming public investments into the accumulation of capital (that is expected, subsequently, to affect growth). Hence, in a similar vein to the literature on public investment and growth, they understand public investment quality in terms of the links, on one hand, between public capital expenditures and capital stock accumulation and, on the other, between investment and development outcomes.

<sup>19</sup> For example, one of the questions to evaluate project appraisal is whether there is a "published document which details appraisal standards" and they attribute a score of 0 "if there is no published document" and 4 "if there is a published document which details appraisal standards" (Dabla-Norris et al. 2012, 260).

which practices for awarding contracts are competitive” and “existence and operation of a procurement complaints mechanism to provide adequate checks and balances in the process” (Dabla-Norris et al. 2012, 242).<sup>20</sup>

More recently, a volume published by the WB and edited by Rajaram, Minh Le, Kaiser, Kim, and Frank (2014), focused on the efficiency and effectiveness of public investment systems. The book titled “The power of public investment management: Transforming resources into assets of growth” is the most comprehensive published text on PIM up to date.<sup>21</sup> The text describes why PIM is important, what stages of the investment cycle should be considered as part of PIM, and how to measure the quality of PIM systems. Rajaram and Frank (2014) describe PIM as critical capability for all countries to use efficiently resources that effectively achieve government goals.<sup>22</sup>

In the second chapter to the book, Rajaram, Minh Le, Biletska, and Brumby (2014), proposed a “unified framework for PIM” to identify “institutional features” that allow evaluating PIM systems and improving them. This framework consists of a set of “desirable institutional arrangements” aimed to minimize the risks of investment processes and to increase the effectiveness of public investments to achieve government’s objectives (e.g. increase growth and/or equity). For that purpose, Rajaram et al. (2014), proposed specific diagnostic indicators of inputs, processes and outputs of the public investment systems that aim to serve as objective measures of its efficiency. Examples of such indicators are the rate of rejection of project appraisals, transparency in project selection, estimation of cost overruns and the rate of project competition. With regards to the procurement phase, their “diagnostic question” consists assessing whether “ministries undertake procurement plans in line with good practice (for example, using competitive tendering)? And, if so, do they implement procurement plans effectively?” (Rajaram, Le, Biletska, et al. 2014, 31).

In a similar vein, a recent staff report by IMF (2015, 5) studied the “trends in and relationships between public investment, infrastructure quality, productivity and growth” and estimated “public investment efficiency across 134 countries”. For that purpose the IMF (2015) designed a *Public Investment Efficiency Index* (PIE-X) to test with a cross-country database.<sup>23</sup> More

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<sup>20</sup> The score methodology used by Dabla-Norris et al. (2012, 262) to measure the level of competition for award of contracts was the following: “The score is 0 if there is insufficient data exists to assess the method used to award public contracts or the available data indicates that use of open competition is limited; 2 if less than 75% of contracts above the threshold are awarded on basis of open competition, but the data may not be accurate; and 4 if accurate data on the method used to award public contracts exists and shows that more than 75% of contracts above the threshold are awarded on the basis of open competition”.

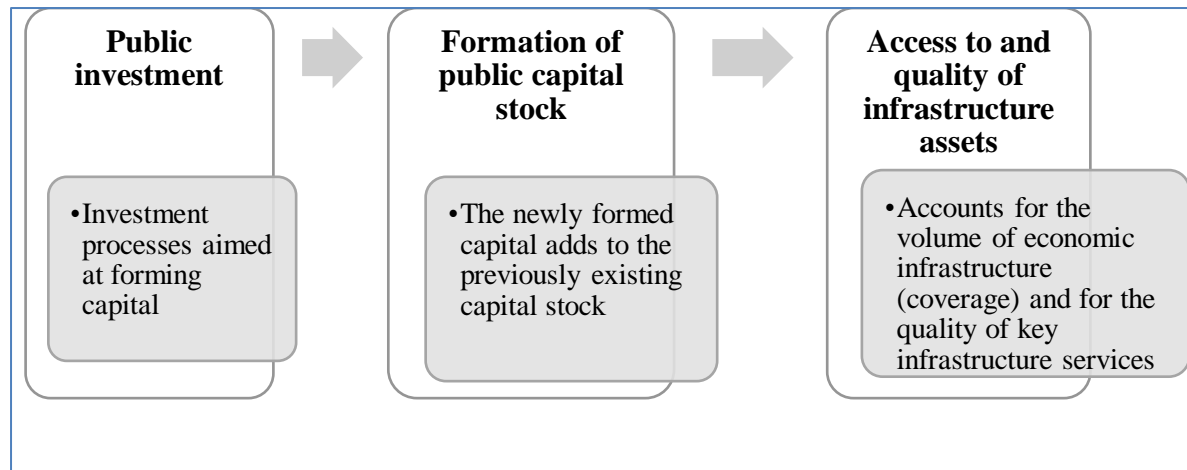
<sup>21</sup> However, in its 203 pages there is no explicit definition of PIM. In the second chapter of the book, Rajaram et al. (2014) implicitly defined the quality of public investment decisions in terms of the efficiency of managing and selecting investment projects.

<sup>22</sup> Rajaram and Frank (2014) argued that the impact of public investment (its social and economic rate of return) depends on the effectiveness and efficiency of the quality of public investment management. Additionally, they define “efficient public investment management” as one that maximizes “the *efficiency* through better selection and *management of investment spending*...” (Rajaram and Frank 2014, 5).

<sup>23</sup> The report explicitly distinguished three distinct concepts linked with the quality of public investment: “public investment efficiency”: defined as “the relationship between the value of public capital stock and the measured coverage and quality of infrastructure assets”; “public investment productivity”: defined as “the relationship

specifically, the IMF (2015) aimed at estimating with PIE-X “the relationship between public capital stock and indicators of access to and quality of infrastructure assets” and ranking countries in terms of their relative efficiency (IMF 2015, 14). The theory of change on the link between public investment and specific economic outcomes that underlies PIE-X is depicted by **Figure 2**:

*Figure 2 – Theory of change underlying public investment efficiency*



Source: Elaborated by the author based on IMF (2015)

The IMF (2015) tested data of over a hundred countries with PIE-X and reported that the results suggested the existence of an “efficiency gap”.<sup>24</sup> This gap fluctuated from an average of 13 percent for advanced economies, 27 percent for emerging markets and 40 percent for low-income developing countries” (IMF 2015, 15). Based on these results, the IMF (2015, 6) claimed: “around 30 percent of the potential gains from public investment are lost due to inefficiencies in public investment processes.” Moreover, IMF (2015, 55) used data of 114 countries, covering the period 1970-2013, to estimate through regression analysis “the varying effects of public investment on growth depending on the degree of public investment efficiency.” Based on its results, IMF (2015) claimed that regardless of the income level of the country, any given country will obtain an “economic dividend” of improving public investment efficiency. Additionally, according to IMF (2015, 18) “moving from the lowest quartile to the highest quartile in public investment efficiency could double the impact of that investment on growth.”

The IMF (2015, 19) also developed a framework called *Public Investment Management Assessment* (PIMA) to “assess the quality of public investment management practices”. The PIMA is analogous to the PIMI developed by Dabla-Norris et al. (2012) and to the unified framework for public investment management proposed by Rajaram et al. (2014). The PIMA covers 15 key variables related to the planning, selection and implementation phases of the

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between investment and economic growth”; and, “public investment performance”: the overall impact of public investment that comprises both efficiency and productivity of public investment (IMF 2015, 7).

<sup>24</sup> “This efficiency gap is measured as the distance between the average country and the frontier for a given level of public capital stock and income per capita.” (IMF, 2015: 15)



investment cycle. For example, the PIMA considers factors such as whether investment decisions are based on clear priorities, whether investment projects were selected based on transparent criteria, and whether the projects were tendered through competitive processes, among others.

Using a dataset of a relatively small sample of countries – 25 in total – the IMF (2015) tested the correlation between the strength of PIM institutions (measured by PIMA) and diverse direct and indirect indicators<sup>25</sup> of public investment efficiency and productivity. The IMF (2015, 28) found that there was a strong and positive correlation between the two variables, controlling for GDP per capita.<sup>26</sup> Additionally, IMF (2015) also claimed that strengthening PIM could reduce significantly the “efficiency gap” by around two thirds.

Aside from incompetence or corruption, what other factors explain inefficiency in PIM? The political economy of public investment projects matters. Robinson and Torvik (2005), for example, argued that the inefficient allocation of resources, for example through “white elephants”, can be an attractive scheme for politicians (particularly incumbents) who aim at making credible commitments to voters. Hence, the misallocation of resources may not be the mere result of inability, but a strategy used to influence the results of elections. Robinson and Torvik (2005, 209) claimed that “when politicians represent groups, a particular politician who values the welfare of the beneficiaries of a loss making project may find it optimal to keep operating it when a politician from a different group, who only values the revenues, cannot.” In the specific case of public procurement, for example, Broms, Dahlström, and Fazekas (2017) reported that in Swedish municipalities the manipulation of procurement processes was associated with low levels of political competition.

The nascent literature on PIM has provided useful tools to assess the quality of public investment processes at the national level. However, there has been less discussion about how to adapt these procedures and indices to examine the performance of subnational units. In this respect, the literature on PIM could be enriched by other literatures. For example, the works on the “resource curse” have used quantitative methodologies to examine the relative efficiency of subnational governments.<sup>27</sup> In this vein, Armenta, Barrero and Prieto (2012), Ardanaz and Tolsa (2016), and Ardanaz and Maldonado (2016) implemented this type of approach to

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<sup>25</sup> To measure the “public investment performance”, the IMF (2015) used two direct indicators (efficiency of investment and productivity of investment) and six indirect indicators (the level of public investment, volatility of total public investment, stability in the sectoral allocation of public investment, growth orientation of public investment, credibility of investment budget execution and integrity of the public investment process).

<sup>26</sup> The IMF (2015, 27) also concluded that “[c]ountries with stronger PIM institutions have more stable, credible, efficient, and productive public investment with lower perceived levels of rent seeking and corruption.”

<sup>27</sup> The IMF’s (2015) PIE-X is analogous to the methodologies used to measure the relative technical or productive efficiency of government units. These methodologies define “efficiency as the distance from the observed input-output combinations to an efficient frontier. This frontier, is defined as the maximum attainable output for a given output level” (Herrera and Pang 2005, 1). The efficient frontier may be calculated through Data Envelopment Analysis (DEA) and Free Disposable Hull (FDH) techniques (Armenta, Barreto, and Prieto 2012; Cook and Seiford 2009; Herrera and Pang 2005). The techniques involve setting an optimization model that allows measuring relative efficiency in terms of the usage of inputs and the generation of outputs by decision-making units.

examine the efficiency of public expenditures funded resource windfalls in Colombia and Peru.<sup>28</sup> This paper, for instance, borrowed a simple procedure from the literature on the political economy of public procurement to measure the quality of procurement processes at the subnational level: calculating a single bidding ratio (Broms, Rasmus, Dahlström, Carl, and Fazekas, Mihaly 2017).

## 1.2 Natural resource revenues and PIM

The literature on the impact of public spending offers a more nuanced picture at the subnational level when the source of income is considered. Several large-N studies explored the impact of oil and mineral revenues at the municipal and/or departmental level in Colombia. The majority of these studies reported that the effects were close to nil and/or that resource-rich subnational governments underperformed with respect to their resource-poor peers.<sup>29</sup> Moreover, Muñoz and Núñez (2011) found a low positive impact of royalties on educational and health coverage and no effect on aqueduct coverage. However, they also reported that other resources from national government transfers (SGP)<sup>30</sup> had significantly higher impact than royalties. In a similar vein, Martínez (2017) identified heterogeneous effects of shocks to property tax revenues and royalties on outcomes of public provision: municipal tax revenues had significantly larger effects on all outcomes (health, education and water) than royalties.

However, more recent evaluations of the effects of royalties at the subnational level show a picture that is less bleak. Some of these studies, concluded that institutional factors appeared to mitigate or reverse the negative impact of resource abundance at the subnational level (Gallego, Maldonado, and Trujillo 2018; Guillermo Perry and Olivera 2010; Guillermo Perry et al. 2012). Additionally, the studies of Martínez (2017) and Gallego et al. (2018), reported positive and significant effects of royalties at the subnational level.

As it was explained in section 2 of the paper, oil royalties were the main source of revenues accrued by Arauca's municipal government. The literature briefed above suggests that resource rich municipalities in Colombia (abundant and dependent on royalties) face particular PIM challenges, just as oil rich countries require developing strong institutions to manage fiscal windfalls and to address the problems associated with an oil bonanza (e.g. high influx of economic migrants) (Ross 2012).

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<sup>28</sup> For an overview on how the concepts and instruments developed by the literature on PIM could be used to assess the quality of capital expenditures funded by oil and mineral royalties in Colombia, refer to Gutiérrez R. (2017).

<sup>29</sup> For example, Benavides et al. (2000), Candelo et al. (2008), Armenta, Barrero & Prieto (2012), and Perry et al. (2015), Ardanaz & Tolsa (2016). There are further nuances reported by the scholarship on the topic. Perry & Olivera (2010) found a positive impact of royalties in GDP per capita in municipalities and a negative impact in departments. Rojas (2014) reported that the short-term impact of royalties on the welfare of the population in oil and mineral producing regions was nil and the long-term impact was negative (close to nil). However, he also found that royalties received by non-producing regions generated a positive impact. Finally, Gallego, Maldonado and Trujillo (2018) claim that, after 2011, the impact of royalties on different household welfare indicators improved significantly (e.g. poverty, household conditions, access to aqueduct and continuous water service, education and health outcomes).

<sup>30</sup> The acronym stands for "Sistema General de Participaciones".

The quality of PIM is important for all governments, it is particularly critical for resource abundant and dependent ones. In that sense, Rajaram and Frank (2014) argue that PIM is key for governments in these contexts for three reasons: (i) resource revenues are volatile and therefore more difficult to manage; (ii) PIM systems in these countries are usually weak or non-existent; and, (iii) investment processes in these countries are particularly prone to corruption problems.

Furthermore, the literature on the “resource curse” has recently used measures of the quality of PIM, such as PIMI, to explore the relationship between resource abundance and/or dependence and the impact of public expenditures. Bhattacharyya and Collier (2013), for example, tested the effect of resource revenues over the accumulation of public capital. Using a cross-country data set, that covered 45 countries during the period 1970-2005, they reported evidence that suggested that resource revenues significantly reduced public capital stock. More specifically, Bhattacharyya and Collier (2013, 11) reported “that a one standard deviation (2.69) increase in the log of resource rents per capita leads to approximately one tenth of a standard deviation (1.77) decline in log per capita public capital stock in an average country.”<sup>31</sup> However, consistently with the mainstream literature on the resource curse, these researchers also found that “good” institutions mitigated the negative effect.<sup>32</sup>

Additionally, Bhattacharyya and Collier (2013, 4) also aimed at exploring “the channels through which resource rents may have an impact on public capital”. For that purpose, they used PIMI to measure of the quality of the public investment process (their dependent variable), and tested whether such quality was affected by resource rents. They found that there was a strong and negative relationship between resource revenues and the quality of investment process. Furthermore, they also found that results held when they tested each of the four components of the index (which measure the quality of the investment in each stage), but for the appraisal stage.

In a similar vein, Woldeyes (2013) used PIMI to evaluate the long-term effects of resource rents shocks in developing countries. The paper assumed that public investment of resource rents is the intermediate channel between resource rents and the growth rate of public capital. His aim was to compare countries with different levels of PIMI to explore the role played by PIM in the diversification of resource rich countries. Using a structural vector error correction model to test data on 37 developing countries Woldeyes (2013, 6) reported that a resource exporter with “good” PIMI experiences “statistically significant and positive non-resource income and public investment effects from resource rents”, while countries with “bad” PIMI present “small and insignificant effects”.

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<sup>31</sup> More specifically, they regressed panel data on the natural resource rents (a proxy for the realised resource endowment) against different measures of capital stock, controlling for country fixed effects, time varying common shocks, income and other covariates.

<sup>32</sup> They introduced into the regression a variable that measured the quality of political and/or economic institutions that interacted with the explanatory variable (resource rents). Bhattacharyya and Collier (2013) used three different indexes on institutional quality and the results in all cases are consistent: “good” institutions moderate or reduce the adverse effects of resource rents on capital.

In summary, the literature on the links between public investment and economic growth identified an “efficiency” or “efficacy” gap that contributes to explain why public investment costs are not equivalent to public sector capital. The nascent literature on public investment management (PIM) conceptualised the processes implemented by governments to deploy capital expenditures. More recently, literature has emerged that offers different indices to measure the quality of PIM at a national government level. However, more research on this topic needs to be undertaken to scale down the analysis to subnational units. Additionally, additional work is needed to understand how and why a specific source of revenues, generated by the exploitation of oil and minerals, is negatively associated with the quality of PIM.

This paper aims to contribute to this literature by assessing aspects of the quality of PIM at the municipal level in Colombia and by exploring the factors and processes that may influence the subnational government’s performance. The following section of the paper justifies the empirical strategy used to address these topics.

## 2. Research design

### 2.1 Case selection strategy and data sources

A case study approach was implemented to assess PIM in Arauca and the processes that may influence its quality.<sup>33</sup> This strategy is adequate to address the research questions since it facilitates exploring “how” and “why” a “social phenomenon works” (Yin 2013). More specifically, case studies are particularly useful to gain in-depth insights on the causal pathway between two or more variables of interest (Gerring 2017; Yin 2013).

The unit of analysis in this research is the Colombian municipality and the period of study between the late 1980s and the mid 2010s. Snyder (2001) argues that moving down the scale to the subnational level when conducting case study research offers at least two advantages. First, it increases the number of observations within cases and offers opportunities to make subnational comparisons (e.g. facilitates holding constant key factors). Second, it increases the sensitivity to variation within a country, thus mitigating the so-called “whole-nation bias” that leads researchers to miss-code cases when they rely solely in country-level data.

The main objective of the research design is to explore a relationship between variables of interest with the aim of building mid-range theories, rather than testing existing hypotheses. A case study approach has a limited capacity to definitely confirm a hypothesis (or to definitely reject it). Instead, this methodology has an exploratory advantage (e.g. generating hypotheses) and allows understanding how the independent, mediating and dependent variables interact

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<sup>33</sup> I follow Gerring (2017, 28) who defines “case study” as the “intensive study of a single case or a small number of cases which draws on observational data and promises to shed light on a larger population of cases.”

when it is supplemented with process tracing analysis. Hence, this paper is more about theory building than theory testing.

The case selection aimed at identifying an “extreme case” of a municipality with low quality of PIM in a context of abundance of revenues.<sup>34</sup> The advantage of the “extreme case design” is that a large variation on the value of the variable of interest “makes a relationship more transparent, and thus helps to identify hypotheses of further research” (Gerring 2017, 68). As it is explained in the third section of this paper, the quality of PIM in Arauca, particularly regarding the quality of public procurement processes, was very low during the period of study. Furthermore, in the last three decades Arauca was one of the wealthiest municipal governments in Colombia: between 1984 and 2015, Arauca received over three times more total revenues than the average municipality and two times more per capita revenues than the average municipality.

The primary data analysed for this paper includes 26 semi-structured interviews<sup>35</sup> to politicians; public officials (municipal, departmental and national); community leaders and members of civil society organisations that monitor how royalties are spent; other civil society representatives (e.g. trade unions, business sector and the Catholic Church); journalists; and, academics (see **Appendix 1** for the list of interviewees).<sup>36</sup> I also used data from direct observation of public investment projects in Arauca. Furthermore, I collected documentary data from newspapers (municipal and national), magazines, and government reports (municipal and national). Moreover, the fiscal and disciplinary responsibility rulings and the judicial rulings were a key source to trace the shortcomings of public investment processes in Arauca.

Additionally, I analysed quantitative data from state and university databases. One important caveat about quantitative information about the public investment process in Colombia: data prior to the mid 2000s is unavailable or very limited. This is why having a glimpse on what occurred with these processes before this date requires relying on qualitative information. Furthermore, the data on public contracting between 2005 and 2015 is very difficult to process due to the limitations of the state’s online platform (SECOP). For example, to extract the data on the number of bids presented per open tendering process it is necessary to review the profile of each process and the minutes of the hearing in which the contract was awarded. The restrictions of the state’s online platform impede to retrieve the data through the use of algorithms. Unless these restrictions are lifted, the only option to process the data on thousands of procurement processes is to do it manually.

## 2.2 Background of Arauca

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<sup>34</sup> An “extreme” case-selection technique aims at identifying extreme values of  $X_1$  or  $Y$  or  $X_1/Y$  (Flyvbjerg 2006; Gerring 2017; Yin 2013).

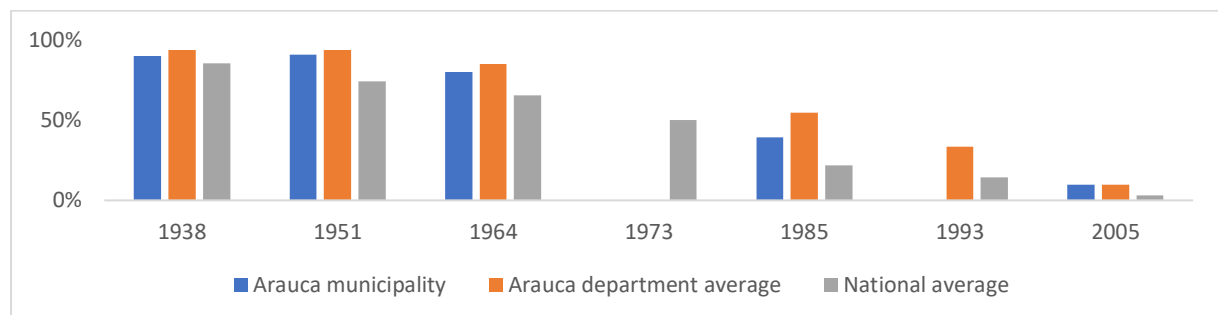
<sup>35</sup> The duration of the interviews ranged from 45 minutes to two hours, but on average lasted between one and one and a half hours.

<sup>36</sup> The majority of the interviewees requested confidentiality and anonymity.

The destiny of Arauca, an impoverished municipality that had been marginalised by the Colombian national state, changed drastically since July 1983 when the multinational oil company *Occidental Petroleum Corporation* (OXY) announced the discovery of the *Caño Limón* oil field. In September 1984, OXY announced that *Caño Limón* had reserves of one thousand million barrels and became the biggest oil discovery in the country's history (Peñate 1991). After more than three decades of exploitation, the reserves of the oil fields located in Arauca's region were found to be twice the size of the initial calculations (Sarmiento 2016).

As in the other colonisation and frontier regions of Colombia the national state's presence in the territory of Arauca was weak (Carroll 2015; Pécaut 2008; Villanueva 2011). Furthermore, before the oil windfall, the municipal government had scant resources to operate and its bureaucracy had little experience in public management.<sup>37</sup> The population of Arauca lacked or had limited access to basic public goods and services before the 1980s. For example, by the time *Caño Limón* was discovered 39% of Arauca's inhabitants lacked access to electricity. This figure is almost twice as large as the national average (**Figure 3**). Before oil, Arauca had unreliable energy services, poor basic and social infrastructure (e.g. water and schools, respectively), and a dysfunctional road network that left it isolated from the centre (598km from Bogotá) and the north of the country.

Figure 3 – Lack of access to electricity in Arauca municipality, Arauca department and Colombia (based on census data), 1938 - 2005\*



Sources: CGR (1935, 1942), CEDE (2017), and DANE (1955, 1971a, 1971b, 1981, 1996, 2008a, 2008b)\*

Additionally, the vacuum of power left by the state in certain areas of Arauca was partially filled by two guerrilla groups, the ELN and the FARC. The first group arrived in the mid 1960s and second one in the early 1980s. Almost two decades later, in the early-2000s, an additional armed group appeared in Arauca: the *Block Victors of Arauca* (BVA), a branch of the AUC paramilitaries. Hence, between 1966 and 2018, at least one armed group was present in

<sup>37</sup> Interviews 103, 119, 120 and 121. These accounts are consistent with the findings of local historian Mantilla (2011).

\* The data on the lack of access to potable water and electricity in Arauca municipality is not available for 1973 and 1993. The departmental data prior to 1991 corresponds to the data of the *comisaría* and *intendencia* of Arauca. The data on the lack of access to potable water and electricity in the *intendencia* of Arauca is not available for 1973.

Arauca.<sup>38</sup> Moreover, during most of this period, a minimum of two armed groups contested Arauca's territory.<sup>39</sup>

Since 1986, the municipal government's main source of income has been oil revenues, more specifically royalties paid by the companies that operate the oil fields. On average, between 1986 and 2015, royalties generated 61% of the total municipal revenues.<sup>40</sup> During the same period, Arauca received over three times more total revenues than the average municipality and two times more per capita revenues than the average municipality.

Shortly after oil poured out of Arauca in December 1985, the locals and the national media started referring to the region as *Saudi Arauca* due to the huge inflow of petro-dollars and the upsurge of violence (Semana 1986).<sup>41</sup> Oil revenues generated expectations of increased wellbeing for Arauca's inhabitants and newcomers. However, a few years after Arauca started receiving a fiscal windfall from oil production, the municipal government earned national notoriety due to the squandering of its resources (El Tiempo 1992, 1997; Semana 1994, 1995b). Arauca's policy outcomes did not surpass significantly the outcomes of the average Colombian municipality even though in the last three decades it was one of the wealthiest subnational governments.<sup>42</sup> According to some of my interviewees, the *Araucanos* believe that the population has not received enough *bang for the buck* from oil revenues.

Does the municipal government's quality of public investment management contribute to explain what appears to be a sub-optimal outcome in Arauca? In the remaining pages, this paper will examine the public investment processes carried out by the mayoralty, particularly regarding the public procurement stage, and the factors that appeared to have an incidence on its quality.

### 3. The quality of PIM in Arauca: Zooming into public procurement

Arauca abounds in anecdotes of "white elephant" types of public investments, that is, projects "with a negative social surplus" (Robinson and Torvik 2005, 198). Misallocation of investments took the form of unfinished projects (often undertaken without feasibility studies), projects with large cost-overruns and time delays, infrastructure that was barely used, poorly maintained and/or abandoned, and exuberant investments with low prospects of adding social value.

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<sup>38</sup> Whenever the paper uses the terms "armed groups" or "armed actors", it is referring exclusively to non-state organisations. I follow Arjona (2016, 26) who uses "the term armed group to refer to all non-state armed organisations that are fighting the war. These include rebels who challenge the government and paramilitaries who aim to defend the status quo."

<sup>39</sup> For an detailed account on armed groups in the municipality of Arauca, refer to Gutiérrez R. (2018).

<sup>40</sup> Own calculations based on CEDE (2017).

<sup>41</sup> Interviews 110 and 112.

<sup>42</sup> In terms of total revenues, between 1986 and 1995 Arauca ranked, on average, in the top 7 of 1098 municipalities; between 1996 and 2005 in the top 30 of 1122; and between 2006 and 2015 in the top 54 of 1122. Own calculations based on CEDE (2017).

For example, the biggest investment projects carried out by Arauca's mayoralty during the late 1980s and 1990s were characterised by heavy cost over-runs and time delays (El Tiempo 1992; Carroll 2015). The first elected mayor spent the equivalent of 32% of the total municipal income accrued in two years (1988-1989) in several sports and leisure venues (professional football stadium, sports coliseum, velodrome & artificial waves pool) that were finished almost a decade later (Castro Caycedo 2003; El Tiempo 1996). Furthermore, the final cost of the pool cost was twice the initial budget (El Tiempo 1996) and the cost overruns of the velodrome and the sports venues were also significant (El Tiempo 1997). The velodrome was scantily used for its purpose and its track is flooded. The pool operated for a few years but it was abandoned since the early 2000s and its machineries are broken or were pillaged.

In other cases of the late 1980s and early 2000s, the delivery of the works had a low quality or the contracted works were never finished or never carried out, despite that the contractor received part or all the funds (Carroll 2015; Castro Caycedo 2003; El Tiempo 1992; Semana 2003b).<sup>43</sup> For example, the second elected mayor (1992-1994) contracted an architect to construct popular housing but by 2005 the work was still not completed because the municipality did not comply with its obligations (delivering basic materials for construction) (CE 2010). Furthermore, there were cases of gross waste of resources. For example, the second elected mayor (1990-1992) illegally hired 2,000 people to guard the construction of a river dyke, a task that should have been undertaken by its builder (CSJ 2005).<sup>44</sup> In another case, the State Council found that the fourth elected mayor (1995-1997) contracted and paid to pave the same road twice through two public works contracts with different contractors (CE 2012).<sup>45</sup>

In his pivotal paper on public investment and economic growth, Pritchett (2000, 368) argued that it is difficult “to go beyond anecdotes and provide more reliable quantitative estimates of investment efficacy” because “[g]overnments have every incentive to make excess costs as difficult to observe as possible.” As it was mentioned in the previous section, in Colombia the data on public investment processes prior to the mid 2000s is not available or is very limited. This paper relied heavily on qualitative data to peer the “black box” of subnational public management, particularly for the period between the 1980s and 2000s. However, during the last decade the Colombian national government has significantly improved the availability of data of its inputs, activities and outcomes. The data of procurement processes undertaken by national, departmental and municipal governments is publicly after 2005 is currently available. This section first analyses the data on the procurement processes undertaken by the mayoralty of Arauca between 2005 and 2015 to measure the quality of procurement. Then, through the triangulation of different sources of evidence, the second part of the section traces the factors and processes that appeared to influence the quality procurement in Arauca.

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<sup>43</sup> Interviews 106 and 115.

<sup>44</sup> Interview 115.

<sup>45</sup> Similar situations of gross negligence also occurred during the governorship of former mayor Julio E. Acosta (FGN 2013; CGR 2016a).

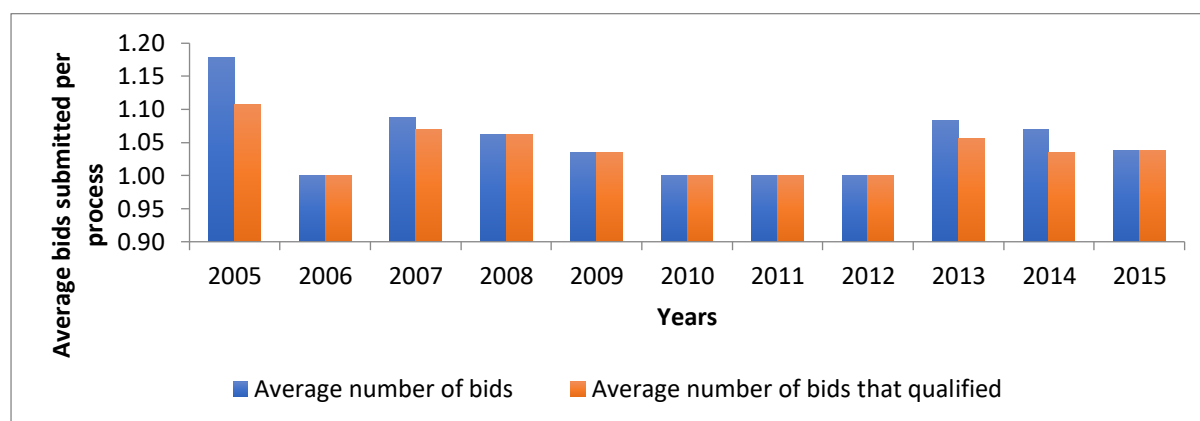


### 3.1 Low procurement quality

Between 2005 and 2015, Arauca’s municipal government predominantly used open public bidding processes (*licitaciones públicas*) to allocate contracts (67% in value), instead of employing direct contracting processes (12% in value).<sup>46</sup> If this figure was taken at face value, it would give the impression that the competition of Arauca’s procurement processes was stronger than the national average: the share (in value) of total contracts directly awarded by Colombian subnational governments was around three times higher than in Arauca (Zuleta, María M., Saavedra, Víctor, and Medellín, Juan C. 2018). Nevertheless, the open bidding processes in Arauca appeared to be a formality rather than an instrument to promote competition among offerors.

To measure the quality of public procurement processes in Arauca I calculated a *single bidding ratio* and the average number of bids per open tendering.<sup>47</sup> The data that was analysed corresponds to the procurement processes carried out by the mayoralty of Arauca between 2005 and 2015, a period of time that covers the tenure of three different mayors. In 310 open bidding processes, Arauca’s single bidding ratio was 96% and the average number of bids submitted per public bidding process was just 1.05. There was little variation across time: the lowest annual average number of offers per process was 1.00 and the highest average in a single year was 1.18 (Figure 4).

Figure 4 – Average number of bids per open public tendering procurement processes in Arauca, 2005-2015



Source: Own calculations based on CCE (2017)

The picture is slightly grimmer if one only considers those bids that “qualified” according to the standards of the mayoralty: the average number of bids submitted that qualified per year

<sup>46</sup> Own calculations based on CCE (2017).

<sup>47</sup> Calculating a single bidding ratio requires to code the number of times that only one bid was submitted in tendering process that was open and intended to be competitive. The ratio “is the percentage of single-bidder contracts awarded of all the awarded contracts by a municipality in a given year” and was used by Broms, Dahlström, and Fazekas (2017, 13) as an indicator of public procurement quality of Swedish municipalities.

was 1.04. Furthermore, there is only one observation in which three offers were submitted to the mayoralty of Arauca in an open bidding process (and one of the offers was unqualified).

Hence, in practice, the concurrence of bidders was extremely limited and there was almost no competition in a decade of open public tendering processes in Arauca. It is plausible to conclude that the level of competition in Arauca's open public bidding processes is lower than in the average Colombian municipality, at least with regards to its performance in the last years. The data published by SCI (2015) shows that the average number of bids per bidding process in Arauca was below the municipal average of 2014. Furthermore, a recent study from the *Colombian Chamber of Infrastructure (CCI)* found that in 2016 Arauca had the lowest average number of bids per open bidding process (1 bid) among the capitals of Colombian departments (El Espectador 2017).

Improving the allocation of resources requires, among others, understanding why the public procurement processes of Arauca exhibited a low level of competition. The rest of this section traces the factors and processes that may contribute to explain such result.

### 3.2 Factors and processes that influence procurement's quality

The literature offers diverse accounts on why and how the quality of PIM may be low. Based on this literature, this section explores three elements that may explain the low quality of procurement in Arauca: (i) transparency in public management, (ii) integrity in public procurement; and, (iii) the paradox of plenty.

An alternative explanation for the low-level competitiveness in the procurement processes is the isolation of Arauca, due to the extremely poor road infrastructure, and the size of its market that makes it less attractive for potential suppliers. The literature on the quality of procurement processes in Colombia has pointed out that small size of certain markets at the subnational level is not attractive for potential competitors (Bernal et al. 2018). This challenge highlights the importance of mechanisms that aggregate demand, such as the ones implemented by the national government since 2013 (Zuleta, María M., Saavedra, Víctor, and Medellín, Juan C. 2018). However, this alternative explanation is not addressed in this case study and could be further explored in future research.

#### 3.2.1 Transparency in public management

Increased government transparency, on its own, may not immediately translate into better public management or reduce corruption (Zuleta, María M., Saavedra, Víctor, and Medellín, Juan C. 2018). However, basic transparency in government affairs enables the concurrence of competitors in procurement processes and, more generally, is a minimum requirement for holding governments accountable. Furthermore, considering that Arauca is an oil-rich

municipality, it is worth noting that the lack of transparency of oil revenues is one of the key sources of problems associated with oil wealth (Ross 2012).<sup>48</sup>

From the late 1980s until the late 2000s Arauca's mayoralty appeared to have very opaque accounting practices with regards to the inflow and management of oil revenues. Two types of (illegal) financial strategies were identified in the first five mayoral terms that exemplify this opacity. The first (1988-1990) and second (1990-1992) elected mayors of Arauca illegally invested significant public funds in securities issued by private financial companies (CSJ 2004, 2005). The value of the resources used to purchase the securities was not minor: the investments in securities by the first mayoralty were equivalent to 21.5% of Arauca's 1990 total income and the investment by the next mayoralty was equivalent to 35.2% of Arauca's 1991 total income. In practice, this strategy allowed the mayors to bypass the budgeting procedure, thereby increasing the secrecy of the inflow of revenues and the use of these resources.

A decade later, in 2009, the eighth elected mayor of Arauca was dismissed from his office and banned from public positions by the Office of the General Procurator of the Nation (PGN)<sup>49</sup> who found that he had illegally invested a significant amount of public funds in dubious financial derivatives (Paredes 2010).<sup>50</sup> Additionally, the second and third elected mayors (1992-1994) allegedly spent resources that were not included in the formal accounts of the mayoralty to purchase goods (e.g. food and tools) that were discretionally distributed by political brokers (CE 2000).

The second strategy used by Arauca's mayors to conceal oil royalties in the 1990s and early 2000s was to manage the revenues through multiple bank accounts, thereby decreasing the traceability of their transactions. This irregular practice was carried out, despite of the fact that since 1995 the regulation mandated mayoralties to use a single bank account. For example, the fourth elected mayor of Arauca (1995-1997) used 18 bank accounts (PGN 2005) and the sixth elected mayor (2001-2003) 13 bank accounts (El Tiempo 2003b; PGN 2006; Semana 2003a). Furthermore, an audit carried out by the Office of the General Comptroller of the Republic (CGR)<sup>51</sup> in 1999 concluded that the lack of transparency in the management of oil revenues was particularly acute in Arauca. With regards to the period 1997-1998, the report concluded:

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<sup>48</sup> Ross (2012) argued that oil revenues are "unusually easy" to conceal because governments can collude with oil companies (especially when the latter are state-owned) to hide the transactions. For example, the secrecy of oil contracts, unreported off-budget accounts and irregular bookkeeping by governments could make oil revenues less subject to oversight than other sources government income. In Colombia, the oil exploration and exploitation contracts are not negotiated nor entered by the subnational governments; these roles are exclusively carried out by the national government. Hence, contract terms were not a source of opacity in the flow of oil revenues that subnational governments accrued. However, this section identifies other sources of lack of transparency at the subnational level.

<sup>49</sup> The PGN is a national state agency that is independent from the national government that oversees legal compliance by public officers and conducts disciplinary processes against these officials. The investigations conducted by the PGN are independent from fiscal (CGR) and criminal processes (judiciary).

<sup>50</sup> A sum equivalent to 26% of Arauca's 2008 total income.

<sup>51</sup> The CGR is a national state agency that is independent from the national government that oversees fiscal compliance by public officers and conducts fiscal investigations against these officials. The investigations conducted by the CGR are independent from disciplinary (PGN) and criminal processes (judiciary).

“[Arauca] does not know what quantity of royalties are entering, nor how much of is spent, because of the deficient system of information and budgetary management” (El Tiempo 1999).

Since the mid 2000s, national-government-led initiatives increased the level transparency of PIM at the subnational level, particularly in the implementation stages of projects. For example, the transparency of public procurement processes increased with the online platform called *Electronic System for Public Procurement* (SECOP).<sup>52</sup> Through SECOP, government organisations register the data related to their procurement processes. SECOP was launched by the national government in June 2006, but its use became mandatory only until 2011.<sup>53</sup> Thanks to the data recorded in SECOP was able to analyse data on procurement processes in Arauca between 2005 and 2015. Since 2015, a new version of the platform (called SECOP II) also allows governments to conduct (not just inform) the procurement processes entirely online. The usage of SECOP II by government organisations is not mandatory and the mayoralty of Arauca has not used it up to date.

Additionally, in 2013, the National Planning Unit (DNP)<sup>54</sup> also contributed to the reduce the opacity of the oil and mineral revenues by launching an online platform called *Royalties Map*.<sup>55</sup> Through the platform anyone, with access to Internet, can obtain information on the flows of royalties transferred to subnational governments and detailed information on how royalties are used by these governments. For example, the platform contains project-level information on its value, objectives and beneficiaries, the contractor in charge of executing the contract, and the progress of the works or programmes.

In recent years, according to the *Open Government Index* of the PGN, the municipal government of Arauca improved its transparency and appeared to be more transparent than the average Colombian municipality (**Figure 5**). The index includes three indicators that assess the openness of municipal governments: information organisation (internal data management), information exposure (diffusion of information to citizens) and information feedback (interaction between governments and citizens) (Remolina 2014).

*Figure 5 - Open Government Index, 2010-2015*

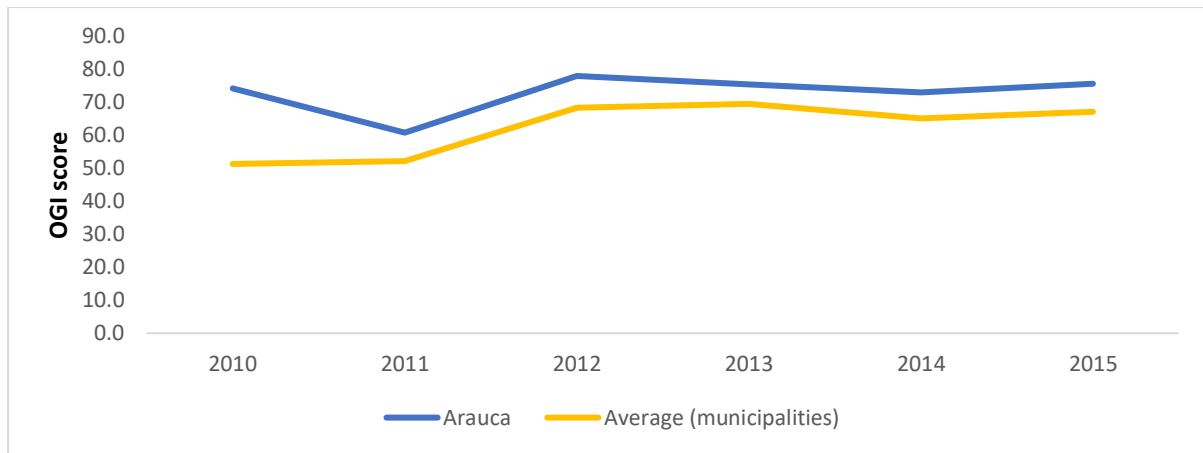
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<sup>52</sup> In Spanish, the acronym SECOP stands for, *Sistema Electrónico para la Contratación Pública*. For an overview of the evolution of SECOP platforms and, in general, of public procurement policies and frameworks in Colombia, see Zuleta et al. (2018).

<sup>53</sup> Decree 3485 2011.

<sup>54</sup> In Spanish, the acronym stands for *Departamento Nacional de Planeación*.

<sup>55</sup> In Spanish, *Mapa Regalías*. The platform’s webpage is: <http://maparegalias.sgr.gov.co>.



Source: PGN (2017)

### 3.2.2 Integrity in public procurement

After a few days of doing fieldwork in Arauca there was one remark mentioned by a local politician that caught my attention: she claimed that in Arauca “even cowboys won public bids to build roads”.<sup>56</sup> Although it sounded a bit exaggerated, after I returned from fieldwork and started reading judicial decisions on the investment of public funds I came across a case with a remarkable resemblance.

In 1993, a shop owner that supplied Arauca’s mayoralty filed a lawsuit against the government for not paying 1,500 baskets full of groceries and tools that were purchased and distributed by the government. The mayor had distributed the goods through a political broker between September 1991 and March 1992 just before the local elections. However, before the mayor’s term finished he fled the country due to the initiation of criminal case against him related to embezzlement (CSJ 2005). Despite of the fact that the shop owner had effectively delivered the goods, the mayoralty had not registered an official accounting of the request. Hence, after the following mayor commenced his term he did not accept to pay a debt that was not formally registered.

However, the new mayor asked the shop owner to provide additional supplies of goods and offered a “solution” to the previous debt with a novel mechanism: the mayor proposed the supplier to repay the debts by awarding him (with another partner) a public works contract (building a roundabout). The shop owner did not accept the offer because it would entail receiving fewer revenues since he had to share a part with the public works secretary. Moreover, a witness testified that the same mayor had extended to him a similar offer, so it seems that the shop owner’s case was not unique (CE 2000).

This example illustrates different types of problems with the integrity of public procurement: lack of transparency, diversion of public funds towards non-programmatic distributive politics,

<sup>56</sup> Interview 122.

and an attempt of manipulating the award of a contract. Unfortunately, as this section explains, this was not an isolated case of lack of integrity in Arauca.

There were cases in which the mayoralty by-passed procurement laws to avoid open tendering. As a result, contractors that lacked the experience and ability to implement the projects were handpicked. Between the late 1980s and early 2000s some of Arauca's mayoralties bypassed procurement rules to avoid competitive bidding process and handpicked contractors that were politically loyal to the mayor.<sup>57</sup> Municipal governments justified the direct selection of contractors without opening public bidding processes through two strategies. First, investment projects were partitioned into several contracts so that each contract did not surpass the threshold (contract value) that would trigger the obligation of carrying out a public bidding process (El Tiempo 2003b). For example, the State Council annulled nine contracts allocated by the fourth elected mayor (1995-1997) because the procurement was carried out through direct contracting despite of the fact that due to the nature of the works the project should have been subject to open and competitive tendering (CE 2012).

Second, some of the municipal governments preferred to contract with non-for-profit civil society organisations instead of profit-oriented companies because the law authorised contracting the former directly when these organisations were qualified experts in the activities required by the contract. However, at least two mayors contracted civil society organisations that lacked the required expertise as an instrument to appoint other sub-contractors discretionally. The PGN dismissed the fifth elected mayor of Arauca (1998-2000) and banned her from occupying public posts for three years because she subscribed directly three contracts related to the development of a housing programme with an international organisation that had no experience in housing projects.<sup>58</sup> The mayor directly selected the international organisation and then she chose the sub-contractors that would effectively carry out works (El Tiempo 2001, 2003a). Similarly, the sixth elected mayor (2001-2003) also contracted a civil society organisation with no prior experience on public works to pave roads in Arauca (CSJ 2009).

Between the late 1980s and early 2010s there were incidents of manipulation of procurement processes and collusion between public officers and contractors (Carroll 2015; CE 2012; CSJ 2008, 2009; PGN 2005). According to two former subnational officials that worked at secretaries of planning, two civil society leaders, a former municipal councillor, and a government official from DNP, it was not infrequent that public officers and contractors jointly drafted terms of reference for public bidding processes.<sup>59</sup> As a result, the terms of references included significant barriers of entry for prospective participants that aimed at benefitting one contractor. In other words, public officers and contractors sometimes agreed beforehand which companies would win the tendering process.

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<sup>57</sup> CE (2000, 2012) and El Tiempo (1992); Interviews 115, 119, 121. Cfr. Carroll (2015).

<sup>58</sup> The mayoralty contracted the *Organización de Estados Iberoamericanos para la Educación, la Ciencia y la Cultura –OEI*, an international organization that aimed at promoting intergovernmental cooperation among its member nations by aiding in the planning and development of regional projects in education, science, technology and the arts.

<sup>59</sup> Interviews 102, 103, 104, 108, 109 and 123.

For example, in 2000 two fuel suppliers submitted their proposals before the mayoralty had issued the public call for proposals and afterwards only their proposals were considered for awarding the contract. The PGN concluded that this was evidence that the process was rigged and fined the mayor (PGN 2005). A similar situation took place in the following mayoralty as well: in at least three procurement processes the offer that won the bid had been submitted to the mayoralty before the call for offers was made (CSJ 2009). Additionally, the sixth elected mayor of Arauca (2001-2003) and several of his principal aides were condemned by criminal courts due to the rigging of several procurement processes in complicity with contractors (CSJ 2008, 2009; El Tiempo 2003b). The criminal courts found evidence on the operation of a “parallel” mayoralty office where public bids were manipulated. More specifically, the courts concluded that the defendants coordinated the bids (to allocate the winners) and the distribution of anticipated payments of the contracts.<sup>60</sup>

During the second half of 2000s and early 2010s, there were more cases of irregularities in procurement processes. In November 2009, the eighth popularly elected mayor of Arauca for the period 2008-2011 was dismissed by the PGN and barred from public office for 20 years because he diverted public funds to buy dubious ‘derivatives’ (El Tiempo 2009; La Voz del Cinaruco 2010; Paredes 2010). Aside from the irregular use of the funds, the resources were lost. As a result, the DNP intervened the municipality of Arauca and until 2014 the mayoralty required the previous approval from the national government to use its oil royalties (CGR 2014b).<sup>61</sup> The dismissed mayor was replaced by the national government, but in December 2015, the PGN found that the substitute mayor and his secretary of education were guilty of manipulating procurement processes by tailoring to terms of reference to favour a specific contractor and preventing that other bidders submitted bids (La Voz del Cinaruco 2017; Meridiano 70 2017, 70).<sup>62</sup>

Finally, according to the reports of the CGR on the investment projects financed with oil royalties in Arauca, the most common problem detected by the oversight authority between 2011-2015 were costs over-runs (CGR 2014a, 2016b). Most of these cases were road investments and in one of the projects the cost overrun reached 140%. The CGR highlighted the low level of competition in the procurement processes and specific problems in the planning phase of the projects (e.g. lack of market studies).

### 3.3 The darkest side of the oil curse<sup>63</sup>

What lessons does the case of Arauca offer with regards to the channels that appear to link the abundance of resource revenues with the quality of PIM? Recall that section 2 of the paper

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<sup>60</sup> The judgements penalised the mayor with 81 months of prison, a fine, and n him from holding public posts for 49 months. The court also sentenced to prison the secretaries of finance and public works.

<sup>61</sup> Interview 108.

<sup>62</sup> The mayor and the secretary of education were dismissed and barred from public office for 11 years. The second instance confirmed the initial decision in June 2017.

<sup>63</sup> This section draws from Chapter 4 of my doctoral thesis (Gutiérrez R. 2018).

mentioned that Arauca has been contested by at least three armed groups. Arauca has been one of the municipalities worst affected by the armed conflict in Colombia.<sup>64</sup> Furthermore, oil companies and their sub-contractors were targeted by the guerrillas since the mid 1980s and until recently.<sup>65</sup> Additionally, according to three subnational officials, three local journalists, and two civil society leaders that were interviewed, both the ELN and FARC forced contractors of public works and projects to pay them a percentage of contracts (Avila, León 2012, Blu Radio 2015, Dunning, Wirpsa 2004).<sup>66</sup> The contractors faced death threats or sabotage of their works if they failed to comply with the guerrillas' demands. A local journalist that was interviewed, conjectured that it was likely that guerrilla groups had informants within the mayoralty that notified them about the award of contracts even before such information was made public.<sup>67</sup>

Hence, it is likely that the risks associated with the armed conflict may have prevented companies from other regions of Colombia to concur in Arauca's open tendering processes. The high risks associated with the operation of companies in Arauca may contribute to explain the low level of competition in the mayoralty's procurement processes.

However, there is another pathway that links oil revenues, the armed conflict and the quality of PIM in Arauca. Since the second half of the 1980s, the armed groups that operated in Arauca formed coalitions with local politicians with the objective of capturing subnational governments and seizing oil royalties. The ELN, the FARC and the BVA affected the *supply-side* (politicians) and *demand-side* of electoral politics (voters). With regards to the supply-side, the armed groups interfered with entry, participation and exit in electoral processes of politicians to favour their political allies. With respect to the demand-side, the alliances of politicians and armed groups (that operated as brokers) proffered positive and negative (coercive) inducements to voters in exchange for their political support or to affect their political behaviour. Subsequently, the armed groups aimed at extracting oil revenues from the subnational governments through irregularities in the public procurement processes.

There are diverse sources of evidence on the interference of the ELN and the FARC in the local elections of Arauca between the late-1980s and 2015 as well as on the intervention of the BVA in electoral politics between 2000 and 2005. The sources include rulings from the Supreme Court of Justice, the State Council and transitional justice tribunals<sup>68</sup>; press reports from national media<sup>69</sup>; NGO reports<sup>70</sup>; and, interviews with municipal and departmental public

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<sup>64</sup> Arauca is placed in the first tier of CERAC's armed conflict index between 2000-2012: strong and persistent intensity and duration of the armed conflict (Restrepo et al. 2014).

<sup>65</sup> For a detailed account on the attacks of armed groups, especially ELN, against the oil sector in Arauca department, see FIP's (2015) report.

<sup>66</sup> Interviews 104, 105, 112, 115, 118, 119, 120 and 122.

<sup>67</sup> Interview 119.

<sup>68</sup> CSJ (2009, 2010, 2016), CE (2009, 2010) and TSDJB (2012).

<sup>69</sup> El Espectador (2014b, 2014c), El Tiempo (1991), El País (2003), Sierra (2003), Semana (2005, 2007, 2016), Verdad Abierta (2009, 2011).

<sup>70</sup> CINEP (2017), CNAI (2011), FIP (2009, 2015) and Otis (2014).



officials, civil society leaders, local journalists and politicians.<sup>71</sup> Moreover, the secondary literature on the dynamics of the armed conflict in Arauca also supports this claim.<sup>72</sup>

The armed groups interfered with the *supply* and *demand*-sides of politics in Arauca to help their political associates reach office. The coercive and non-coercive strategies employed by the armed groups created competitive advantages for their associates in local elections. Through this strategy, the armed groups sought to capture the subnational governments and access public funds.

With regards to the *supply-side* of politics, the armed groups acted as gatekeepers of entry into politics, promoted candidacies, coerced politicians and political brokers, and attacked electoral authorities. First, the armed groups had incidence on the nomination processes: they obliged politicians to request the groups' prior endorsement to run for office.<sup>73</sup> In other cases, politicians sought their support or were directly selected by armed groups with the objective of concerting future decisions about government.<sup>74</sup> For example, the implementation of investment projects by Arauca's municipal government was frequently part of the pacts between the armed actors and politicians; the former, influenced procurement processes to syphon part or all the funds received by the selected contractor.

Additionally, armed groups promoted candidates by financing their electoral campaigns, either directly or through the contractors of the subnational governments (that were later handpicked in procurement processes).<sup>75</sup> In the case of ELN, the fresh money derived from extorting oil companies and contractors in the mid-1980s allowed the guerrilla group to compete for the sympathy and allegiance of local politicians (e.g. funding Liberal Party candidates) and to distribute largess among its social base. (FIP 2015; Valencia 2008).<sup>76</sup>

Similarly, in the early 2000s, the BVA paramilitaries funded local electoral campaigns in Arauca (CSJ 2016; TSDJB 2012; Verdad Abierta 2009). The paramilitaries forged alliances with politicians of Arauca that were not part of the Liberal Party, particularly with emerging leaders that had been politically marginalised by the ELN (Ávila and León 2012). According to a testimony of a former paramilitary, in 2002 several candidates in Arauca department requested the backing of BVA for mayoralty elections (CSJ 2016).

Perhaps the most documented case of the allegiance of *Araucano* politicians with paramilitary groups was the one of former mayor of Arauca Julio E. Acosta (1988-1990), who was elected

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<sup>71</sup> Interviews 105, 106, 107, 110, 118, 119, 120, 122 and 123.

<sup>72</sup> See for example, Ávila and León (2012), Caballero Reinosa (1999), Carroll (2015), Castro Caycedo (2003), Duque Daza (2015), Gómez Rivas (2016), Gutiérrez Lemus (2012), Millán (2011), Moreno (2010), Peñate (1991, 1998), Pérez Salazar (2011), and Valencia (2008).

<sup>73</sup> Ávila and León (2012), El País (2003), FIP (2015), Gutiérrez Lemus (2012) and Moreno (2010); interviews 118, 120 and 123.

<sup>74</sup> Castro Caycedo (2003) and CSJ (2010, 2016); interview 118.

<sup>75</sup> CINEP (2016), CSJ (2010, 2016), El Espectador (2014a), Gutiérrez Lemus (2012), Otis (2014), Semana (2003a), Sierra (2003), and Verdad Abierta (2009); interviews 110 and 119.

<sup>76</sup> Interview 120.

governor of Arauca department in 2003. In November 2013, a specialized criminal judge of first instance<sup>77</sup> found him guilty of facilitating the arrival of the BVA to Arauca department, receiving funds from the BVA for his 2003 electoral campaign, and facilitating BVA's operation in the department (CSJ 2016).<sup>78</sup> According to a local journalist, the story of Acosta depicts why for *Araucanos* the displacement of the ELN by the BVA meant that they “had a new boss who did exactly the same that the previous one: with arms, put their hands on oil royalties.”<sup>79</sup>

In Arauca, the dyad *armed groups – politicians* operated as a joint venture whereby each side cooperated to pursue a strategic objective. While the former aimed at gaining competitive advantage in elections, the latter sought to increase their capacity of extracting rents. Once politicians reached office the armed groups expected the former to meet their end of the deal: tolerating or facilitating the interference of the armed group in Arauca's public administration processes and decisions to facilitate the appropriation of public funds.

In this vein, referring here to the example of ties between the ELN and politicians in Arauca, the Supreme Court of Justice concluded that:

“due to the agreements with the rebel group, the appointment of public officials -both at the top level ... and at the operative level-, were imposed by the guerrilla commanders and favoured persons that were close to their organisation; in sum, the tactic consisted in manipulating the Administration of the region (department – municipality), to access the management of the payrolls and the official budget of the territory...” (CSJ 2010).

In October 23 2003, the front page of the regional *El País* newspaper read “*The ELN was the 'lord and master' in Arauca*”. The press report covered the judicial processes initiated against 22 public officials, politicians (including mayoral candidates) and social leaders of Arauca due to their alleged links with the ELN and embezzlement of public funds (El País 2003). Although years later at least half of the defendants were cleared (Carroll 2015), the Supreme Court of Justice confirmed the charges of embezzlement against a former mayor of Arauca (Jorge A. Cedeño) and condemned a former governor of Arauca (Jose V. Lozano) due to his collusion with the ELN (CSJ 2009, 2010). Moreover, the testimonies cited by the Supreme Court account for the ELN's co-option and/or influence of the subnational administrations of Arauca between the late 1980s and 2003 (CSJ 2010).<sup>80</sup>

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<sup>77</sup> However, due to procedural issues detected by the Supreme Court of Justice, this criminal process has not finished (CSJ 2016).

<sup>78</sup> On the influence of the BVA paramilitaries in Arauca's local politics, particularly regarding the alleged links with Julio A. Acosta, see Ávila and León (2012), CINEP (2017), CSJ (2016), Gutiérrez Lemus (2012), Otis (2014), Semana (2016), and Verdad Abierta (2009, 2011); interview 105.

<sup>79</sup> Interview 119.

<sup>80</sup> According to the testimony of a former ELN member, the most significant source of income for ELN in Arauca, at least during the 1990s and early 2000s, was subnational revenues (CSJ 2010)

The capture and embezzlement of public funds was not limited to the guerrillas, the paramilitaries also learned the trick. For example, the former commander of the BVA acknowledged before a tribunal the influence of the group on the governorate of Arauca. He claimed that in exchange of BVA's support during the elections, former mayor and governor Julio E. Acosta agreed to give in to the group's interests ("*plegarse a los intereses*") once he held office (Verdad Abierta 2009). Additionally, according to testimonies cited by the Supreme Court of Justice, the deal of Acosta with the BVA allegedly consisted of receiving funds to finance his candidacy for the governorate in exchange for granting access to public funds, providing privileged information to the paramilitary group and preventing confrontation between the military forces and the paramilitaries (CSJ 2016).

These examples were not exceptional cases. Diverse sources of evidence suggest that the armed groups influenced public administration in Arauca – almost continuously – between the late-1980s and, allegedly, until the present day.<sup>81</sup> The interference of armed groups on Arauca's public administration decisions operated through, at least, two mechanisms that were linked: the appointment of key public officials and instructions on the deployment of public resources. In practice, both interventions affected the selection of contractors in public procurement processes. The influence of armed groups on these aspects of public management enhanced their capacity to capture oil revenues.

First, armed groups sought the appointment in public office of people that sympathised with them or that were willing to cooperate and that could facilitate the appropriation of oil revenues. These groups were particularly interested in positions that were accountable for finance, planning and public works. These appointments allowed armed groups to retrieve reserved information, monitor the compliance of mayors, and – very importantly – interfere with the destination of public expenditures (e.g. type of goods provided and beneficiaries). Furthermore, armed groups influenced the selection of undertakings in public procurement processes (using threats or colluding with public officials) and – in exchange – the contractors rewarded them with a percentage of the contract's value (e.g. 5% - 10%) (Gómez Rivas 2016; Gutiérrez Sanín and Zuluaga Borrero 2011; Moreno 2010).

In short, the objective of embezzling funds by interfering with public procurement processes partially explains why armed groups sought key positions for their sympathizers in the subnational governments. For example, Dunning and Wirpsa (2004: 88) report that in Arauca "guerrilla informants working inside municipal offices influence who receives public works contracts: those businesses favoured are ones willing to provide the rebels with a cut." Additionally, the formulation of the projects was surreptitiously prepared by public officials and contractors, who then were subsequently favoured by rigged bidding processes (CSJ 2008,

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<sup>81</sup> Sources of evidence: judicial rulings (CSJ 2010, 2016); NGO reports (CINEP 2017); press reports (El Tiempo 2016; Semana 1995a, 2003a; Sierra 2003; Verdad Abierta 2009); interviews 102, 105, 106, 110, 118, 119, 120, 122). The secondary literature also supports this claim, for example see: Ávila and León (2012), Carroll (2015), Castro Caycedo (2003), Gutiérrez Lemus (2012), Moreno (2010), Peñate (1991, 1998), Pérez Salazar (2011), and Valencia and Ávila (2014). However, Duque Daza (2015), claims that between 2007 and 2014, the armed groups have had less capacity to interfere with public administration.

2009).<sup>82</sup> Additionally, armed groups supposedly created paper companies and through these legal vehicles they became recipients of project funds that were never executed (Castro Caycedo 2003, El Tiempo 1992, Moreno 2010).<sup>83</sup>

Armed groups, factions of politicians and some contractors webbed a vicious circle whereby each leveraged the other to get a slice of the oil royalties. The armed groups supported politicians in exchange of future access to oil royalties; contractors agreed to finance politicians anointed by armed groups in exchange of future public works and projects; and, politicians leveraged their electoral campaigns with the armed groups' power and the resources from contractors. Hence, for most politicians and contractors, accessing political power and public contracts required sharing a portion of oil revenues with armed powers.<sup>84</sup> A local political analyst explained the relationship between armed groups, politicians and contractors in the following terms:

*Contractors do not become rich on their own; they have to go to the forest to be held accountable by guerrilla groups, share part of the bout and agree which electoral campaigns will be financed. This is how guerrillas have governed; politicians and contractors have been their instruments.*<sup>85</sup>

Despite of the close relationship among armed groups and politicians, public officers and contractors, the former also resorted to coercion to extract oil revenues. While some politicians and public officials cooperated with armed groups as sympathizers or even as allies of the group, in other occasions armed groups coerced the authorities to take certain decisions.<sup>86</sup> A former municipal civil servant that worked in the late 1980s depicted the situation: he had been forced to flee Arauca after being tied to a tree in the middle of nowhere by the ELN: "they obliged you to militate, you had to be with them or co-govern... or else...".<sup>87</sup> Similarly, according to the indictments of the FGN against BVA members, the paramilitaries allegedly tortured and murdered civil servants that refused to grant public contracts that would have benefitted the BVA (Verdad Abierta 2013).

In summary, this section showed that the municipality of Arauca exhibited low levels of competition in public procurement processes during the period of study. Furthermore, different shortcomings in the investment processes were discussed. First, the lack of transparency in public management until the mid 2000s. Second, violations to integrity of public procurement, which included the manipulation of processes, diversion of investment funds towards

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<sup>82</sup> For example, by drafting terms of reference of the bid that foreclose the possibility of third parties to comply with the public bid's requirements and concur to the competition.

<sup>83</sup> Interview 104.

<sup>84</sup> Interviews 103 and 119; Gutiérrez Lemus (2012), Gutiérrez Sanín and Zuluaga Borrero (2011) and Moreno (2010).

<sup>85</sup> Interview 110.

<sup>86</sup> Interviews 105 and 122; Sierra (2003).

<sup>87</sup> Interview 105. A similar account on the hegemony of armed groups over civil servants in the early 2000 (from a local public high-ranking officer) was reported by Sierra (2003): "Due to pressures or because they sympathise, almost everyone has had to do with guerrilla. Who has not done it is dead or exiled."

clientelistic strategies, and sheer corruption. Finally, the presence and activities of armed groups also a negative impact on procurement processes. On one hand, the violent extortions against companies and, in general, the intensity of the armed conflict appeared to dissuade companies from other regions of Colombia to participate in Arauca's public procurement processes. On the other hand, the armed groups interfered with the procurement processes with the objective of getting a cut of Arauca's public funds.

## 4. Conclusions

Before the 1980s, Arauca was a marginal municipality located in the border of Colombia that had little experience in public investment management due to the shortage of resources and the centralisation of government. The state and the civil society were weak and armed groups defied the state's monopoly of force. In this context, since the mid-1980s, the municipal government received an oil-driven windfall. A couple of interviewees, a civil society leader and a local journalist, compared Arauca's situation to that of a person who wins the lottery and wakes up millionaire, with no prior experience in managing wealth.<sup>88</sup>

The emerging literature on public investment management (PIM) conceptualised the main stages of the investment process and developed various procedures to assess its quality. However, most of the literature on PIM pays particular attention to the assessment of country-level investment systems. Consequently, most of the data and recommendations address national level challenges. Less is known about PIM at the subnational level and it is not clear what factors and processes influence its quality at this level.

In this paper, I aimed at contributing to fill this gap of the literature through a case study of a Colombian municipality. The research assessed the quality of PIM of Arauca between the late 1980s and 2015. The investigation focused on PIM's implementation phase, mainly on public procurement processes. After measuring the quality of procurement through two different measures (single bidding ratio and average number of submitted bids per process), I triangulated qualitative and quantitative to explore three aspects of the implementation of investment projects in Arauca: (i) transparency in public management; (ii) integrity in public procurement; and, (iii) the potential effects of the prevailing source of income, oil revenues.

The quantitative evidence on the quality of procurement between 2005 – 2015 is telling: during this period of time, Arauca exhibited a very low level of competitiveness in open tendering processes. Moreover, the qualitative evidence on the investment processes before the mid 2000s suggests that the lack of competition in procurement has been a constant since the onset of the oil bonanza (mid 1980s). It is likely that the deficiencies with PIM in Arauca ultimately reduced the impact of public investments. What factors and processes may explain this outcome?

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<sup>88</sup> Interviews 104 and 121.

During most of the period of study, the transparency of government in Arauca, particularly regarding the management of public funds, was very low. Furthermore, the qualitative evidence shows that in some cases, between the mid-1980s and late 2000s, the mayoralties took advantage of the opacity to carry out irregular procedures. The national open government initiatives, implemented since 2005, appeared to have a positive impact on the transparency of Arauca's procurement processes. However, given the low level of competition in Arauca's open tendering processes between 2005 and 2015, it seems that greater transparency in public management is not enough, on its own, to ensure competitive procurement processes.

Additionally, the evidence assessed in this paper reveals that the competition in procurement processes was often curtailed by mayoral governments of Arauca. Procurement processes were not always used to attract and select the most suitable contractors through competitive processes. Instead, it seems that senior public officials, in several occasions, handpicked contractors based on their political allegiance. Hence, the qualitative evidence suggests that integrity violations contribute to explain the low level of competition in procurement processes in Arauca.

Furthermore, the activity of armed groups in Arauca during the period of study also appeared to influence the quality of public procurement through at least two mechanisms. First, the armed groups often targeted companies linked to the extractive sector and contractors of the subnational governments. It is likely that the duration and intensity of the armed conflict prevented companies from other regions to participate in Arauca's public procurement processes. Second, the armed groups attempted – and often succeeded – to capture the municipal governments with the objective of extracting public funds. Their strategy consisted on interfering the supply and demand-sides of politics with the objective of holding control of the subnational governments. Once the armed groups were able to coerce, influence, co-opt and even capture the subnational governments, they extracted oil rents through diverse means – including the manipulation of procurement processes.

Further work needs to be done to establish the causes for the low concurrence of bidders and low competition in procurement in Arauca and, more generally, in Colombian municipalities. There are alternative or complementary explanations that merit further inquiry.<sup>89</sup> For example, oil producing areas are more distant from the main cities of Colombia and in some cases their road connections to the economic centres of the country are very poor. This generates a barrier of entry to the bidding process, both in terms of the participation in the process itself and the higher costs of providing goods and services for companies located outside the oil area. This is very likely that Arauca's small size of its market and its isolation (through road), also contributed to explain the low concurrence of bidders in public procurement processes.

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<sup>89</sup> The level of concurrence in the procurement processes of the cases appeared to be lower than the municipal average. However, it is worth noting that reports from state agencies, the media and civil society organisations suggest that low contestability in open public bidding processes is a nation-wide problem, particularly at the subnational level (Meléndez 2015). The Society of Colombian Engineers published data on a sample of open tendering processes in Colombian municipalities during 2014 and reported that only 61 of them (mostly capital cities) had an average number of bids (per public bidding process) that was equal or above to 2.0 (SCI 2015).

Overall, the evidence presented in this paper showed that Arauca's subnational government was not able to develop strong processes and institutional arrangements to invest oil revenues. However, in this respect, I share Ross's (2012) warning: policy failures of oil states are not necessarily the result of weaker institutions but that these states require stronger governments than usual. Oil states, have more arduous and onerous tasks than non-oil producers, particularly regarding the management of oil revenues.

Additionally, this paper offers a cautionary tale about decentralisation of resource revenues and their concentration in oil producing areas while an armed conflict is still ongoing. Researchers like Eaton (2006), Sánchez and Palau (2006), and Rettberg and Prieto (2018), also warned about the downsides of the decentralisation process in Colombia with regards to the armed conflict.<sup>90</sup> In sum, they argued that decentralisation appeared to intensify the dispute of local political power by armed groups in areas where the national state did not have the monopoly of force. The concrete risk, identified by the cited researchers and also reported in this paper, was that the transfer of political and economic resources to subnational governments may motivate armed groups to attempt the seizure of those revenues to sustain their armed struggle.

The challenges of public investment management in Colombian municipalities justify the implementation of programmes that aim at strengthening local capabilities, rather than relying on national level interventions or re-centralisation. This appears to be a pressing need for subnational governments that are rich in oil and/or mineral revenues. One of the main difficulties of harnessing the wealth of natural resources consists on building domestic capacity to invest. This capacity-building is what Collier (2010) termed "investing in investing". The capabilities for planning, prioritising, selecting, implementing, monitoring, and evaluating, investment projects is a key element for successful delivery of public investments.

The promotion of competition in public procurement and the prevention of irregularities in public management at the subnational level appear to require country-wide strategies that articulate different state organisations. With regards to transparency, the national government organisation in charge of promoting the efficiency in procurement processes (*Colombia Compra Eficiente* - CCE), should consider opening the data between 2005 – 2015. As it was explained in section 2 of the paper, the restrictions of the SECOP platform impede retrieving the information on the number of bids submitted per open tendering. This barrier affects civil society organisations that work on social control and even oversight state authorities at the national and subnational level. Furthermore, as it was also suggested by Zuleta et al. (2018), the national competition authority should use SECOP to identify red flags of potential collusion in public procurement and prosecute potential infringements to antitrust law at the subnational level.

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<sup>90</sup> In a similar vein, recent research on the nature and causes of violence in Latin America and the Caribbean, contended that new forms of violence emerged with the democratisation and decentralisation processes. In certain contexts, like the Colombian one, these processes favoured criminal groups that captured local resources and power (Hilgers and Macdonald 2017).

Additionally, the case of Arauca shows that transparency, on its own, is not sufficient to promote competition in procurement processes. The new version of SECOP allows state organisations to conduct all the procurement process through the platform and this upgrade may effectively lower the barriers of entry to participate in tendering processes at the subnational level. SECOP II enables online processes and transactions, it is not just a “bulletin board” like the first version of the platform. However, since 2015, less than 20 % of the subnational governments have migrated to SECOP II. The national government should address the technical barriers that currently prevent more subnational governments from using regularly SECOP II.

The judicial, disciplinary and fiscal rulings of Colombian courts and state oversight authorities were a key source of qualitative evidence used in this research. The fact that this source of evidence was available suggests that the central state was not absolutely absent or dysfunctional. However, there was at least one notorious shortcoming in the enforcement of the law. The intervention of the judiciary was often not timely and, therefore, did not prevent the irregularities. Despite of the early alarms and denunciations, the majority of the investigations were initiated years after the wrongdoings had been committed. For example, the criminal processes against politicians of Arauca due to their links with armed groups only lifted off in the early 2000s, at least a decade after this type of conspiracies had started.

Additionally, most judicial decisions against the mayors or governors who were found guilty were effective after their respective term had finished. In fact, most of the judicial processes on conspiracies between politicians and armed groups finalised many years (even a decade) after the deeds occurred. The investigations of other national oversight agencies, such as the PGN and CGR, against the public officials that were involved in irregular activities, related to the management of oil revenues, also lacked celerity. Hence, the deterrence and prevention of the processes that led to the capture of local democracy and subnational governments require timely interventions of the judiciary and non-judiciary oversight authorities.

The tardiness of the judicial and disciplinary system appeared to decrease the deterrence of punishments. Since the judicial system is centrally organised in Colombia, the national state was entirely responsible for improving these key components of the rule of law. The vulnerability of subnational governments, specifically in oil rich areas, justifies a greater investment in the capacity of judiciary and non-judiciary organisations in charge of law enforcement in these territories.

This research had several limitations. First, the lack of quantitative data on investment processes before 2005. For example, I cannot claim that the qualitative evidence on integrity in procurement processes allowed me to conduct a systematic examination. Second, the restrictions of the quantitative data between 2005 and 2015 limited undertaking a more ambitious investigation. Until the restrictions on SECOP’s platform are lifted, conducting a within-country econometric-based study on subnational procurement processes would require to hire a legion of research assistants.



A third limitation, linked with the previous one, is that the generalisability of this research is problematic. Arauca is not an average municipality nor close to the mean. There are at least three features that makes it different: (i) the source of its income, oil wealth; (ii) the intensity of the armed conflict in its territory; and, (iii) that fact that it is a capital city of a department. Hence, the findings in Arauca's case are not necessarily representative of Colombian municipalities.

Still, further research may be conducted in municipalities with different attributes to improve our understanding on the quality of PIM at the subnational level in Colombia. Comparative case studies, using a most-similar or most-different case selection strategies, could offer additional insights on the factors and processes that influence the quality of PIM at the subnational level in Colombia. Additionally, in the near future, econometric-based studies could take advantage of the data produced by SECOP II. Furthermore, if the limitations to SECOP's data base are lifted, evaluating the impact on procurement quality due to the migration from SECOP to SECOP II would be a promising avenue of research.

## Appendix - Interviewees

<b>Interview Number</b>	<b>Description of the interviewee</b>	<b>Category</b>	<b>Date</b>
<b>101</b>	DNP regional royalties' senior official	Central government	02/02/2016
<b>102</b>	DNP regional royalties' official	Central government	02/02/2016
<b>103</b>	Civic leader from Arauca municipality (citizen oversight)	Civil society	02/02/2016
<b>104</b>	President of business association in Arauca	Civil society	04/02/2016
<b>105</b>	Arauca municipality official	Subnational government	04/02/2016
<b>106</b>	Civic leader from Arauca municipality	Civil society	04/02/2016
<b>107</b>	Former municipal and departmental official	Subnational government	05/02/2016
<b>108</b>	Former Secretary of Planning of Arauca	Subnational government	05/02/2016
<b>109</b>	Arauca departmental official (planning secretariat)	Subnational government	05/02/2016
<b>110</b>	Political analyst who works in local media	Journalist	05/02/2016
<b>111</b>	Former Secretary of Planning of Arauca	Subnational government	06/02/2016
<b>112</b>	Former departmental official	Subnational government	06/02/2016
<b>113</b>	Advisor of oil trade union	Civil society	08/02/2016
<b>114</b>	Oil trade union leader	Civil society	09/02/2016
<b>115</b>	Former member of Arauca's municipal council	Subnational government	09/02/2016
<b>116</b>	Civic leader from Arauca municipality (citizen oversight)	Civil society	09/02/2016
<b>117</b>	Advisor of local university linked to projects funded with oil royalties	Civil society	09/02/2016
<b>118</b>	Priest from the Catholic Church	Civil society	09/02/2016

<b>119</b>	Local radio journalist	Journalist	10/02/2016
<b>120</b>	Local journalist	Journalist	10/02/2016
<b>121</b>	Local radio journalist	Journalist	10/02/2016
<b>122</b>	Secretary of government of Arauca's governorate. Former member of the national congress, member of the department's assembly and municipal councillor	Subnational government	10/02/2016
<b>123</b>	Former member of Arauca's departmental assembly	Subnational government	10/02/2016
<b>124</b>	Researcher from think tank based in Bogotá that has researched Arauca	Scholar	11/02/2016
<b>160</b>	Researcher from think tank based in Bogotá that is specialized on Arauca's armed conflict	Scholar	02/03/2016
<b>181</b>	Former DNP royalties' official	Subnational government	26/08/2016

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