

# Supplementary Materials

## Letting Luck Decide: Government Procurement and the Growth of Small Firms

August 9, 2019

### 1 Data Gathering Process

The data gathering process was divided into three phases. The first phase consisted in obtaining detailed information on all the public purchases performed under the *menor cuantia* processes for the years 2008-2012. This provided information on each public purchase as well as all individuals and firms that submitted a bid to participate in each public work. The second phase of the project consisted in obtaining detailed information on each individual and firm that participated in the *menor cuantia* process during the sample period. The third and final phase of the project, consisted in cleaning and entering this information into a database.

#### 1.1 Phase I

The purpose of this phase was to obtain all public works done under the *menor cuantia* process for the years 2008-2012. To do this, I first downloaded a master file that contained all purchases done by public institutions in Ecuador for the years 2009-2015. The file was downloaded from the website of the public procurement agency (SERCOP)<sup>1</sup>

The master file contained all purchases done by the government; including those done under processes other than the *menor cuantia*. Next, I selected the universe of all purchases under *menor cuantia*, which include their respective dates of publication. For each purchase, the file made available a description of the procurement process used, a purchase code, dates of the purchase, and other information. This file, however, did not provide the level of detail needed for the project. To obtain this additional information, I created a data scrapping code that searched and downloaded all meta-data. This required doing a personalized

---

<sup>1</sup>The website link is: <http://portal.compraspublicas.gob.ec/sercop/analisis-sercop/>. After opening the link, it is necessary to click under “Reportes del Sistema de Contratación Pública” which will provide a login to the database. Once inside the database, one can choose to download a report containing all information. This file was obtained on February 15th, 2015

Figure 1: Sample search result for menor cuantia

Parámetros de Evaluación

Parámetro
Equipo Propuesto
Indices Financieros
Experiencia General
Experiencia Específica
Experiencia Personal Técnico
Participación Nacional

Resumen de Evaluaciones

Proveedor	Producto	Equipo Propuesto	Indices Financieros	Experiencia General	Experiencia Específica	Experiencia Personal Técnico	Participación Nacional	Mypes Nacionales	Mypes Participación Local	Metodología y Cronograma	Otros Parametros de calificación
ALVARADO PAREDES CARLOS MARCELO 180301550001	SERVICIOS DE GESTION DE PROYECTOS RELACIONADOS CON LA CONSTRUCCION DE OBRAS DE INGENIERIA CIVIL DE CALLES	Cumple	Cumple	Cumple	Cumple	Cumple	No cumple	No cumple	Cumple	Cumple	Cumple
CARRASCO LLERENA MARISOL ROMELIA 180301550001	SERVICIOS DE GESTION DE PROYECTOS RELACIONADOS CON LA CONSTRUCCION DE OBRAS DE INGENIERIA CIVIL DE CALLES	Cumple	Cumple	Cumple	Cumple	Cumple	No cumple	No cumple	Cumple	Cumple	Cumple
HERNANDEZ ACOSTA VICTOR MANUEL FRANCO 1801308907001	SERVICIOS DE GESTION DE PROYECTOS RELACIONADOS CON LA CONSTRUCCION DE OBRAS DE INGENIERIA CIVIL DE CALLES	Cumple	Cumple	Cumple	Cumple	Cumple	No cumple	No cumple	Cumple	Cumple	Cumple
Jurado Ampyo Freddy Danilo 1802005619001	SERVICIOS DE GESTION DE PROYECTOS RELACIONADOS CON LA CONSTRUCCION DE OBRAS DE INGENIERIA CIVIL DE CALLES	Cumple	Cumple	Cumple	Cumple	Cumple	No cumple	No cumple	Cumple	Cumple	No cumple

Proveedores habilitados para el sorteo por parte de la Entidad Contratante

Nro.	Proveedor	Descripción	Estado
1	ALVARADO PAREDES CARLOS MARCELO	CUMPLE LO SOLICITADO EN LOS PUEGOS	Habilitado
2	CARRASCO LLERENA MARISOL ROMELIA	CUMPLE LO SOLICITADO EN LOS PUEGOS	Habilitado
3	HERNANDEZ ACOSTA VICTOR MANUEL FRANCO	CUMPLE LO SOLICITADO EN LOS PUEGOS	Habilitado
4	MORALES VITERI FRANKLIN ROSOBERTO	CUMPLE LO SOLICITADO EN LOS PUEGOS	Habilitado
5	PALATE MOYOLEMA LUIS ALONSO	CUMPLE LO SOLICITADO EN LOS PUEGOS	Habilitado
6	PAREDES RUESEL JORGE EDUARDO	CUMPLE LO SOLICITADO EN LOS PUEGOS	Habilitado
7	ROBERO OJEDA BYRON PATRICIO	CUMPLE LO SOLICITADO EN LOS PUEGOS	Habilitado

Bien/Obra/Servicio Adjudicados

Categoría	Descripción Bien/Obra/Servicio	Proveedor	Cantidad Adjudicada	Precio Unitario	Subtotal	Tiempo de Entrega	Razon Adjudicación	Estado
833220013	SERVICIOS DE GESTION DE PROYECTOS RELACIONADOS CON LA CONSTRUCCION DE OBRAS DE INGENIERIA CIVIL DE CALLES	Alvarado Paredes Carlos Marcelo 180301550001	1	USD 17,855.68	USD 17,855.68	45	Proveedor ganador en el Sorteo MC-Obras con estos productos	Adjudicado

Requirements

Evaluation

Qualified

Winner

The figure above presents the search results of a public work. The top part presents the requirements for the contest. The evaluation part presents, for each bidder, a note stating if they satisfy the requirements. The qualified sections shows those providers that qualified for the contest. The winner section presents the winner of the contest.

search for each public work in the sample. The gathering was restricted to the purchases which 1) were finalized 2) had a unique id number and 3) were awarded to only one contractor. 28,957 out of the total 32,551 public works in the *menor cuantia* met this criteria and form the universe of public works for the project.

The process above was done in three different batches during the year 2015. The first batch was a pilot project done in March,2015. The second batch took place between April and June,2015. The third batch was done in August,2015. For each of the 28,957 files, there were 9 pages that were downloaded: 1) basic information on the contract including length, terms of payment, and contacts, 2) information about deadlines for the public work, 3) information about the providers that had been invited, 4) information about the requirements for the public works, 5) information about the results of the contest 6) information about the providers that qualified, 7) information about the products or services that were required, 8) a section for questions and answers, and 9) an archive with all files for the process.

## 1.2 Phase II

In phase II of the project, I obtained the financial information of the firms and individuals that participated in the *menor cuantia* process. The meta-data, gathered in the previous phase, provided information on all providers that submitted a bid to perform the public work. Each provider has a unique identification number used for tax purposes (RUC or registro único del contribuyente). There are two different types of providers: firms and self-employed. By law, financial information for firms is available at the Superintendencia de Compañías, (SUPERCÍAS). SUPERCÍAS is a government institution and all companies must provide financial records, tax statements, and contact information to them. SUPERCÍAS makes this information publicly available through their website.

Repeated requests to obtain the data on companies went unanswered. As a result, an automated program was created to obtain this information.<sup>2</sup> I downloaded two types of data. The first included basic company information and was scrapped directly from the website. The second included all yearly financial statements on record for that company.

## 1.3 Phase III

In this phase of the project, I had to enter the financial information into a database. The statements were stored as PDF documents in two different formats: 1) a scanned image and/or 2) a structured document. To obtain the financial data from the structured document, I ran several scripts to do so automatically. Figure 2 provides a sample of this type of balance. For balances that were scanned copies of documents, the data was entered manually and verified by at least an additional worker and was tested using accounting principles. Figure 3 and Figure 4 provide an example of the financial information available as scanned documents.

The final phase involved testing all information gathered to ensure it was consistent.

---

<sup>2</sup>In order to minimize the risk of skipping some companies, I performed the scraping 3 times on those companies I was not able to find.

Figure 2: Sample financial information

The figure above presents a financial return available as a structured format. The data from this balance was extracted using an automated script.

Figure 3: Sample financial information

<b>FORMULARIO</b>		<b>DECLARACIÓN DEL IMPUESTO A LA RENTA Y PRESENTACIÓN</b>	
101		DE BALANCES FORMULARIO ÚNICO SOCIEDADES Y	
Resolución No.		ESTABLECIMIENTOS PERMANENTES	
NAC-DGER 2008-1520		No. FORMULARIO	
		27149721	

---

100 IDENTIFICACIÓN DE LA DECLARACIÓN		(O) ORIGINAL - (S) SUSTITUTIVA	031	<input type="checkbox"/>
AÑO 102 2009		No. FORMULARIO QUE SUSTITUYE	104	<input type="checkbox"/>

---

200 IDENTIFICACIÓN DEL SUJETO PASIVO		EXPEDIENTE	203	6543
RUC 201	1190082470001	202	GUIGONVECA SOCIEDAD ANONIMA	

---

**OPERACIONES CON PARTES RELACIONADAS DEL EXTERIOR EN EL EJERCICIO FISCAL (INFORMATIVO)**

Activo con partes relacionadas del exterior	011	<input type="checkbox"/>	Ingreso con partes relacionadas del exterior	013	<input type="checkbox"/>
Pasivo con partes relacionadas del exterior	012	<input type="checkbox"/>	Egreso con partes relacionadas del exterior	014	<input type="checkbox"/>
TOTAL OPERACIONES CON PARTES RELACIONADAS DEL EXTERIOR (011 + 012 + 013 + 014)			015	<input type="checkbox"/>	

---

ESTADO DE SITUACIÓN		ESTADO DE RESULTADOS INGRESOS			
ACTIVO					
<b>ACTIVO CORRIENTE</b>		Ventas netas locales gravadas con tarifa 12%	601	<input type="checkbox"/>	
Caja, bancos	311	642.93	Ventas netas locales gravadas con tarifa 0%	602	215,125.72
Inversiones corrientes	312	<input type="checkbox"/>	Exportaciones netas	603	<input type="checkbox"/>
Cuentas y documentos por cobrar - corrientes		Otros ingresos provenientes del exterior	604	<input type="checkbox"/>	
Relacionados / Locales	313	<input type="checkbox"/>	Rendimientos financieros	605	<input type="checkbox"/>
Relacionados / Del exterior	314	<input type="checkbox"/>	Otras rentas gravadas	606	<input type="checkbox"/>
No relacionados / Locales	315	<input type="checkbox"/>	Utilidad en venta de activos fijos	607	<input type="checkbox"/>
No relacionados / Del exterior	316	<input type="checkbox"/>	Dividendos percibidos locales	608	<input type="checkbox"/>
Otras cuentas y documentos por cobrar - corrientes		Rentas exentas provenientes de donaciones y aportaciones			

The figure contains a financial return available as scanned copies. The data from this balance was obtained via manual entry.

Figure 4: Sample financial information

FORMULARIO DE BALANZES-FORMA ESTABLECIDA		No. 50 02157567	
199 IDENTIFICACIÓN DE LA DECLARACIÓN		Nº DE FORMULARIO QUE SUSTITUYE	
AÑO 2008		IMPORTANTE: SÍRVASE LEER INSTRUCCIONES AL REVERSO	
200 IDENTIFICACIÓN DEL SUJETO PASIVO		EXPERIENTE 106663	
RUC 0992224355		RAZÓN O DENOMINACIÓN SOCIAL LINSATA SA	
OPERACIONES CON PARTES RELACIONADAS DEL EXTERIOR EN EL PERÍODO			
ACTIVO CON PARTES RELACIONADAS DEL EXTERIOR	UT	+	INGRESO CON PARTES RELACIONADAS DEL EXTERIOR
PASIVO CON PARTES RELACIONADAS DEL EXTERIOR	UT	+	EGRESO CON PARTES RELACIONADAS DEL EXTERIOR
ACTIVO CORRIENTE			
CAJA, BANCOS		+	VENTAS NETAS LOCALES GRAVADAS CON TARIFA 12%
INVERSIONES CORRIENTES		+	VENTAS NETAS LOCALES GRAVADAS CON TARIFA 0%
RELACIONADOS		+	EXPORTACIONES NETAS
DEL EXTERIOR		+	OTROS INGRESOS PROVENIENTES DEL EXTERIOR
NO RELACIONADOS		+	RENDIMIENTOS FINANCIEROS
DEL EXTERIOR		+	OTRAS RENTAS GRAVADAS
LOCALS		+	UTILIDAD EN VENTA DE ACTIVOS FIJOS
RELACIONADOS		+	DIVIDENDOS PERCIBIDOS LOCALES
DEL EXTERIOR		+	DE RECURSOS PÚBLICOS
NO RELACIONADOS		+	DE OTRAS LOCALES
DEL EXTERIOR		+	DEL EXTERIOR
(-) PROVISIÓN CUENTAS INCOBRABLES	(-)	-	OTRAS RENTAS EXENTAS
CREDITO TRIBUTARIO A FAVOR DEL SUJETO PASIVO (IVA)		+	

The figure contains a financial return available as scanned copies. The data from this balance was extracted via manual entry.

## 2 Sample selection

A total of 1,920 registered firms participated in the process. To obtain the firm's financial information, I used the unique tax identification number and performed a search on the Superintendencia de Compañías' (SUPERCIAS) website. I was able to obtain information on 1836 firms. The remaining 84 firms did not have a record. Out of the 1836, there were 661 firms that won, at least once, a contest where there was only one qualified participant for the lottery. These 661 firms participated in a total of 3,160 public contests. I exclude from the sample these firms. The total sample for public works under menor cuantia to be 1,175 firms participating in 5,475 public works. The data obtained from the procurement agency suggests that all but 16 of the 5,475 public works were completed and delivered.<sup>3</sup>

---

<sup>3</sup>The remaining 16 public works were terminated unilaterally. There is no information that describes the reasons for the termination.