

FORMATO DE PRESENTACION DE PROPUESTAS PARA FINANCIACIÓN

Fondos de Arranque Junio 2018

INFORMACIÓN GENERAL		
Datos del profesor	<i>Nombre y apellidos</i>	<i>Eduardo Ferraz Castelo Branco Ferreira</i>
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	<i>Unidad académica a la que pertenece</i>	<i>Economía</i>
Título de la propuesta	<i>Police & Thieves: geographical crime profiling</i>	
Temática de estudio o investigación	<i>Economics of Crime</i>	
Objetivo general de la financiación	<i>Support the research of optimal allocation of police units in urban centers</i>	
Duración de la ejecución <i>(en meses)</i>	<i>22</i>	
Fecha esperada de inicio	<i>March 1st, 2020</i>	
Fecha esperada de culminación	<i>December 31st, 2021</i>	
Costo general de la financiación	<i>20 million COP</i>	

CONTENIDO DE LA PROPUESTA

1. Planteamiento de la necesidad y justificación

It is a well established empirical result on the economics of crime that preventive and punitive measures reduces the incidence of criminal activities (Levitt, 1996; Cook, 2009; Draca and Machin, 2015). In particular, an increase of the size of the police is a possible channel to reduce crime (Levitt, 1997, Evans and Owens, 2007). Two of these works (Di Tella and Shargrotsky, 2004; Klick and Tabarrok, 2005) study the effect of the displacement of police units on the geographical crime profiling. Following the events of terrorist attacks respectively in Buenos Aires and in London, policing in the attacked areas became more intensive. Although crime in these areas dropped after these changes, overall crime in both cities remained constant: the new configuration of police units displaced crimes into regions that became underprotected.

The evidence presented in these works illustrates the importance of considering the spatial allocation of police units as a crucial part of the policing strategy. The probability of catching criminals is indeed an object of equilibrium coming from decisions of where to commit crimes and where to place police units. Indeed, it is typical that more than 50% of the reported crimes in bigger cities occur in less than 5% of the streets — the hot-spots of crime (Weisburd 2005; Collazos et al, 2019).

Surprisingly enough, most of the papers dealing with this issue are too stylized. Papers dealing with equilibrium environments (Freeman, Grogger, and Sonstelie, 1996; Lazzati and Menichini, 2016; Algahtany, Kumar, and Barclay, 2017) divide cities into regions and the decisions are made at region-level. They all explain crime across regions, but none of them is able to explain what happens inside of the regions. Some other papers aim at explaining the occurrence of crime at local-level without equilibrium considerations (Short et al, 2008; Mohler et al, 2011), i.e., in their papers, agents are not necessarily optimizing when they choose where to commit crimes.

A well-designed police allocation strategy has an important property in terms of policy. Changing the geographical configuration of the police does not imply a higher level of expenditures in police. Therefore, any reduction on property and violent crime rates (these last ones particularly costly to the society) under a new distribution of police units is highly cost-effective.

2. Objetivos

This study aims at developing a framework (both theoretical and empirical) able to perform a positive analysis of the geographic crime profiling as well as make policy-recommendations. These are the main questions of this project:

1. How does crime respond to the spatial distribution of police units?
2. How does policy units should be placed in order to reduce crime?
3. If police is not optimally allocated, what could explain its current allocation (for example, are there more police in richer areas by political reasons)?
4. What does make a region prone to have more crime (for example, proximity of a poorer area with a richer one)?

3. Equipo de trabajo			
Nombre	Unidad académica de afiliación*	Correo electrónico	Tiempo de dedicación*
Eduardo Ferraz	Universidad del Rosario	eduardo.ferraz@urosario.edu.co	600 hours
Ian Flint	University of Melbourne	ian.flint@unimelb.edu.au	400 hours
4. Resultados esperados			
I will produce a policy-oriented paper containing an original framework modelling criminal and police decisions by point processes. The appropriateness of the models will be tested using available data on crime and police locations.			
5. Detalle de las actividades a financiar			
<p>There are two main source of costs for this project. The first one is related to the development of the theoretical model. This project is coauthored with Ian Flint, a specialist on point processes with publications on the best journals of mathematics and engineering currently working at the University of Melbourne. Therefore, I intend whether to visit Flint or to receive him at Rosario for 3 months.</p> <p>I would also like to hire a Joven Investigador in order to help me gathering necessary data for the project, specifically, data on crime and police locations of cities, topography, price of apartment (to use as a proxy of wealth in each region), demographics and public expenditures.</p>			
6. Presupuesto.			
The costs for the visit includes flight tickets and accommodations which I estimate around 8-10 million COP. The costs for hiring the Joven Investigador are estimated in 10-12 million COP.			
7.cronograma			
<p>March 2019 - April 2019: research of datasets and theoretical methodology May 2019 - July 2019: full development of a theoretical model August 2019 - March 2020: collection and analysis of data applied to the model April 2020 - December 2020: redaction of the article</p>			

Una vez su Fondo de arranque sea aprobado, el presupuesto de este deberá ser mensualizado con el apoyo de la Dlel y de la DAF de su Unidad Académica. Por la naturaleza propia de las investigaciones que este Fondo apalanca, es posible que se requiera del aval del comité de ética. En caso de que la Dlel considere que su propuesta debe pasar al comité de ética, será contactado de manera directa para surtir los requisitos propios de esta instancia.