

 <b>Universidad del Rosario</b>	<b>FORMATO DE PRESENTACION DE PROPUESTAS PARA FINANCIACIÓN</b> <b>Fondo Small Grants</b>	<b>Junio 2018</b>
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PARTE I: INFORMACIÓN GENERAL DEL PROYECTO	
<b>Título del proyecto</b>	<i>Mission statements content and readability and their relation to financial and innovation related performance measurements</i>
<b>Descriptores / palabras claves</b>	<i>Mission statement; performance; Latin-America; innovation; institutionalism</i>
<b>Duración del proyecto (en meses)</b>	<i>12</i>

PARTE II: CONTENIDO DE LA PROPUESTA DE INVESTIGACIÓN	
1. Planteamiento del problema y objeto de estudio	
<p>Mission statements (MS) are the most frequently used management tools for strategic planning (Bart, 2001a). Their main purpose is to answer two essential questions for any organization: what is our business? What should it be? Scholars on the strategic planning field have been studying the relation between MS and performance among private, public, NGO or multilateral (e.g. The World Bank) organizations. In this line, several remarkable results have been found, such as comprehensive and key components analytical frameworks (Campbell, 1989; Pearce, 1982; Lucas, 1998; Tarnow, 2001); and qualitative and quantitative performance evaluation frameworks (Baetz &amp; Bart, 1996; Bartkus et al., 2005). Despite these developments, the literature on MS and performance shows six gaps: 1) an absence of cross-national studies and 2) a disengagement from the global South; 3) no discernible open access digital dataset for replications, triangulation, or further studies; 4) a narrow scope on performance measurements (financial, most of the time); 5) a limited attention on MS readability; and 6) reduced samples. In consequence, we proposed: 1) to conduct cross-national studies on the relation between MS content and readability, and organizational performance related to both financial indicators and innovation; 2) to considerably amplify the samples sizes; and 3) to provide an open access digital dataset for MS from organizations worldwide.</p>	
2. Justificación	
<p>Strategic planning and the development of MS are neither irrelevant nor low-cost worldwide practices adopted by private, public, NGO, and multilateral organizations. In practical terms, this study would be useful to any organization to identify similarities or differences on their MS and their competitors at a local or international level, while in the making of its strategic plan. Practitioners also would browse our digital open dataset to develop more effective MS according to local/regional socio-economic environment (e.g. are the MS from U.S companies related to their performance on innovation? It would be pertinent for companies from El Salvador to emulate their MS?). As we expect to find differences between the Information and Communication Technology (ICT) sector and the agricultural sector, our dataset also would bring specific patterns (to either avoid or to embrace) by practitioners according to their sector-dependence requirements.</p> <p>Besides practical purposes, we will make available out dataset for the academic community for them to perform replications or conduct further studies in response to recent requirements stated by the scientific community (Aarts et al. 2015). In addition, we will perform text-mining and content analysis and visualization to integrate methods and tools from different fields such as network sciences or literature (Boyle &amp; Hall, 2016) to triangulate and explore the data from different angles, as also argued by the scientific community.</p>	
3. Marco teórico y estado del arte	

Any Mission Statement (MS) should give answer to two questions: “what is our business and what should it be?” (Ducker, 1973). Moreover, a comprehensive-oriented MS should consider at least four assertions (Figure 1): 1) purpose; 2) values; 3) standards and behaviors; and 4) strategy (Campbell, 1989). Regarding MS and its relation with organizational performance, the first peer-reviewed study, to our knowledge, was published by Pearce and David (1987) arguing that higher performing firms have a comparatively more comprehensive MS considering Pearce’s (1982) eight key components (i.e. target customers; basic products or services; primary markets; principal technology; concern for survival, growth and profitability; company philosophy; company self-concept; and concern for public image) and that corporate philosophy and self-concept and public image, were essential components to include also in a MS.

Besides Pearce and David seminal study, Christopher Bart has been one of the most prolific and discussed scholars in the field. Studies conducted by Bart and colleagues, have found: 1) a high impact of MS on employee’s behavior, and a tenuous relation between MS and several financial measures on industrial and consumer goods firms (Bart, 1996a); 2) a correlation between MS development processes satisfaction and employees’ behaviors (Bart & Baetz, 1998); and 3) that certain MS components (e.g. distinctive competence/strength; specific patients; unique identity and concern for satisfying stakeholders; inspirations; benefactors; competitive orientation; and business definition) showed a significantly positive correlation with performance in hospitals (Bart & Tabone, 1999) and behavioral, financial performance and mission achievement measures in private organizations (Bart & Hupfer, 2004).

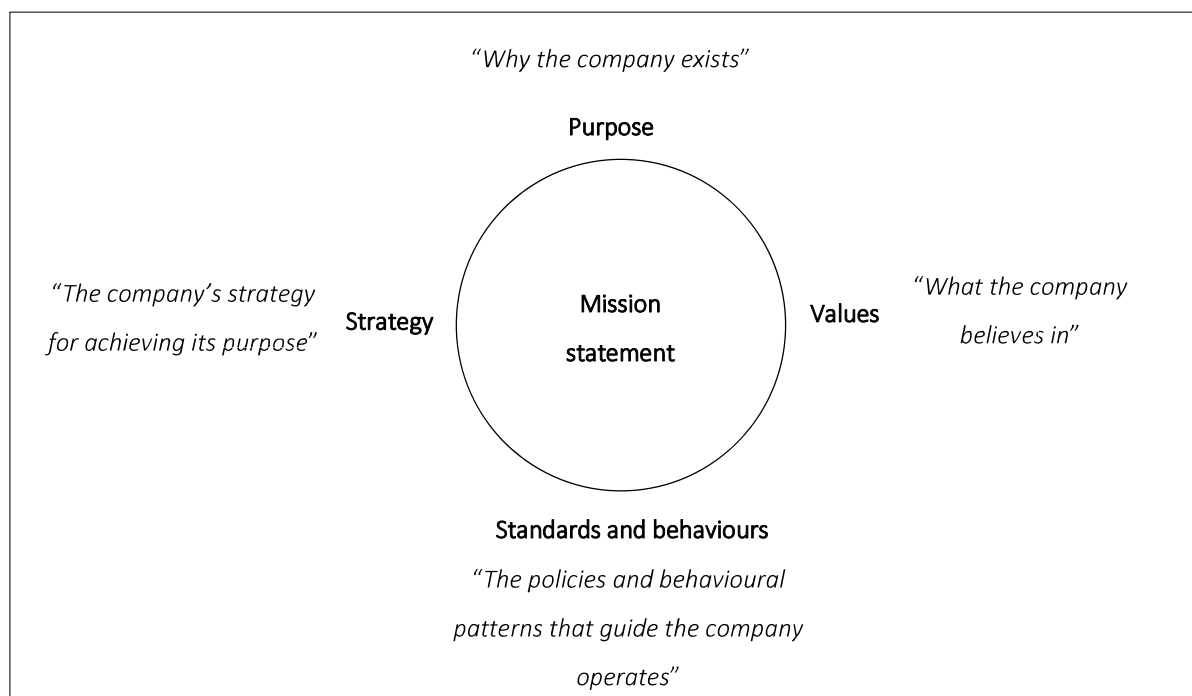


Figure 1. What is a mission? Source: Campbell (1989: 4).

On the other hand, there are few studies, to our knowledge, that reject the relation between MS and performance in organizations. Bart and Baetz (1998) found no significant difference between firms with and without MS, but only in return on assets. Nevertheless, as previously presented, Bart and colleagues have presented evidence in contrast. O’Gorman and Doran (1999) also reported no correlation between MS and performance in Irish SMEs; and Dermot

(2012) found that the value added per employee was the only performance measure associated with the absence of a MS in Slovenian firms.

In the Colombian case, Godoy-Bejarano and colleagues (2017) analyzed a sample of 99 Colombian companies to estimate the effect of MS on financial performance as both profit margin and assets turnover. They found that the effect on assets turnover dominates when mission statement compels good assets management practices. Also, they used a new approach to analyze the MS components, by considering four components: 1) language positivism; 2) the orientation to financial goals; 3) the readability; and 4) the assets endowment. They named this characterization “Mission Power”. However, we noticed that the MS and financial information gathered for the study was not comparable. For the financial analysis, they used the public database developed by the Supervisory Agency of Commercial companies (*Superintendencia de Sociedades*) for the period 1995-2014. On the other hand, the MS were extracted from the companies’ website, presumably around the year the study was published (¿2015-2016?). In consequence, how accurate is to compare a company’s MS in 2015-2016 to its financial performance in 1995? The companies chosen in the sample should have the same MS for the past +20 years. Neither of them changed it? This was not clear in the study.

To synthesize the most significant findings on this debate enriched by more than 20 years of empirical evidence, Desmidt and colleagues (2011) conducted a meta-analysis, arguing that MS do matter for private organization and that they have a measurable and positive association, albeit small, with financial performance. That meta-analysis only used 14 studies although. By comparison, the most-cited meta-analysis on business, management and accounting research field used 52 studies (Orlitzky et al., 2003). Still is not time to shelve the discussion.

Despite these developments, the literature on MS and performance shows the following gaps: 1) an absence of cross-national studies and 2) a disengagement from the global-South, as the majority of studies has been conducted in the U.S.; 3) no discernible open access digital dataset for replications, triangulations or further studies; 4) a narrow scope on performance measurements (financial); 5) a limited attention on MS readability, as argued by Sattari and colleagues (2011) in their research on MS readability in firms from U.S.; and 6) reduced samples (an average sample size of 150 organizations based on 20 studies [Desmidt et al., 2011]).

On the one hand, the innovation performance measurements used in this study will be that of SCImago Lab institutional ranking. This assessment contemplates three indicators to evaluate the organizations included in the ranking (e.g. government entities, health and higher education institutions), namely: research output, innovation and societal impact. On the other hand, the financial measurements considered, are: sales, profit, EBITDA, assets, number of employees, ROI, exportations, presence in the stock exchange, and status (public or private). More on that in the methodology section.

#### 4. Objetivos

Main:

- To evaluate the content and readability of MS and their relationship with financial and innovation performance measurements from organizations worldwide.

Specific:

- To determine if the organizational performance is explained by both MS content and readability or some set of hidden variables.
- To recognize the differences of content and readability features among either countries or regions.
- To determine the either more or least used key-terms used in MS and their relatedness to other terms.
- To produce a digital open access dataset with the MS of the sample of organizations worldwide analyzed.

## 5. Metodología propuesta

- Data on performance and MS

We will use two rankings to identify firms and other organizations and their performance in both financial and innovation aspects. Those rankings are briefly described below.

- Ranking *America Economía*

This ranking is produced by the business magazine: America Economía. They evaluate the Top 500 companies from Latin-America based on financial and societal aspects, such as: sales, profit, EBITDA, assets, number of employees, ROI, exportations, presence in the stock exchange, and status (public or private). The broad regional-scope of this dataset, its standardization, and the additional gathering of the MS of each firm considered for the ranking that would be conducted in this study, would allow us to be one of the first research projects, to our knowledge, to evaluate the content and readability of MS and their relationship to performance in financial and societal related-metrics in firms in Latin-America.

- Institutional ranking: SCImago

This ranking is produced by SCImago Lab: a technologically-based company offering innovative solutions to improve the scientific visibility. In their “Institutions Ranking” they evaluate ≈5,200 organizations from around the world; and from government, health, and higher education, to firms. They produced their evaluation of those organizations, based on three indicators:

- Research (50%): output, international collaboration, normalized impact, high quality publications, excellence, excellence with leadership, and scientific talent pool.
- Innovation (30%): innovative knowledge and technological impact
- Societal impact (20%): web size and domains inbound links.

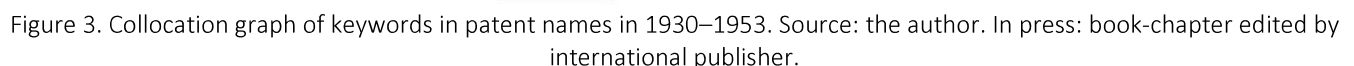
The global scope of this dataset, its standardization, and the additional gathering of the MS of each firm considered for the ranking that would be conducted in this study, also would allow us to be the first research projects to evaluate the content and readability of MS and their relationship to innovation related-indicators in organizations worldwide.

- Content analysis

We will use Voyant Tools for text-mining and content analysis of MS. Voyant Tools (Sinclair & Rockwell, 2016) is an open-source web-based text reading and analysis environment that uses more than 20 visualization tools to analyze a text corpus, which allow to users to investigate patterns of words/concepts and to explore and visualize large corpus of text systemically, exercises than may be hardly to perform by simply reading.

Voyant Tools has been used for research and peer-reviewed publications (Boyle & Hall, 2016). The content analysis consists in the frequency of terms (i.e., the number of times a word is mentioned in a corpus), their ratio and the

Figure 3 present the collocation graph of a +1,500 dataset of patents in Colombia from 1930-2000. From 1930–1953, most patents concerned *máquina* (machines), followed by *mejoras* (improvements) and *sistemas* (systems). The keyword *máquina* was proximate to *café* (coffee), *palma* (palm) and *desfibrar* (to defibrillate).



- Readability indices

Generally speaking, the readability indices are designed to gauge the understandability of a text, for instance, in years of schooling required for by person to understand it clearly. The readability of any text, including MS, has several effects in terms of effective communication, understanding, and coordinating and acting on daily-actions according to a common goal inside any organization (Sattari, Pitt and Caruana, 2011). Cochran and David (1986) were the first, to our knowledge, to measure the effect of readability of MS on corporate communications. They argued for the MS to be more readable in order to improve both internal (e.g. employees) and external (e.g. shareholders) corporate communications.

This approach is not free from criticisms. Some scholars consider that terms broadly used in business are given lower a hyper-inflated readability index (Loughran & McDonald, 2014). For this reason, besides the widely used Gunning Fog index, we also would calculate five more index to compare them among different languages and context (Spanish MS and English MS; or MS from Europe and MS from Asia). The formula for each index is showed below.

- Flesch Kincaid Reading Ease

Based on a 0-100 scale. A high score means the text is easier to read. Low scores suggest the text is complicated to understand. A value between 60 and 80 should be easy for a 12 to 15 year old to understand.

$$206.835 - 1.015 * \left( \frac{\text{words}}{\text{sentences}} \right) - 84.6 * \left( \frac{\text{syllables}}{\text{words}} \right)$$

- Flesch Kincaid Grade Level: These equate the readability of the text to the US schools grade level system (grade level indicator).

$$0.39 * \left( \frac{\text{words}}{\text{sentences}} \right) + 11.8 * \left( \frac{\text{syllables}}{\text{words}} \right) - 15.59$$

- Gunning Fog Score: grade level indicator.

$$0.4 * \left( \left( \frac{\text{words}}{\text{sentences}} \right) + 100 * \left( \frac{\text{complex.words}}{\text{words}} \right) \right)$$

- SMOG Index: grade level indicator.

$$1.0430 * \sqrt[3]{30 * \text{complex.words/sentences}} + 3.1291$$

- Coleman Liau Index: grade level indicator.

$$5.89 \left( \frac{\text{character}}{\text{words}} \right) - 0.3 * \left( \frac{\text{sentences}}{\text{words}} \right) - 15.8$$

- Automated Readability Index: grade level indicator.

$$4.71 \left( \frac{\text{character}}{\text{words}} \right) + 0.5 * \left( \frac{\text{words}}{\text{sentences}} \right) - 21.43$$

Each index has its particularities. For example, Coleman Liau and ARI rely on counting characters, words and sentence, as the others indices number of syllables and complex words (≥3 syllables)

- Structural Equations Model (SEM) and regressions.

Figure 4 presents a first draft of the SEM intended to be executed. The purpose of Figure 4 is strictly illustrative. Neither any data nor calculation has been yet gathered or analyzed. This first draft is subject to change/to be improved in the course of the research.



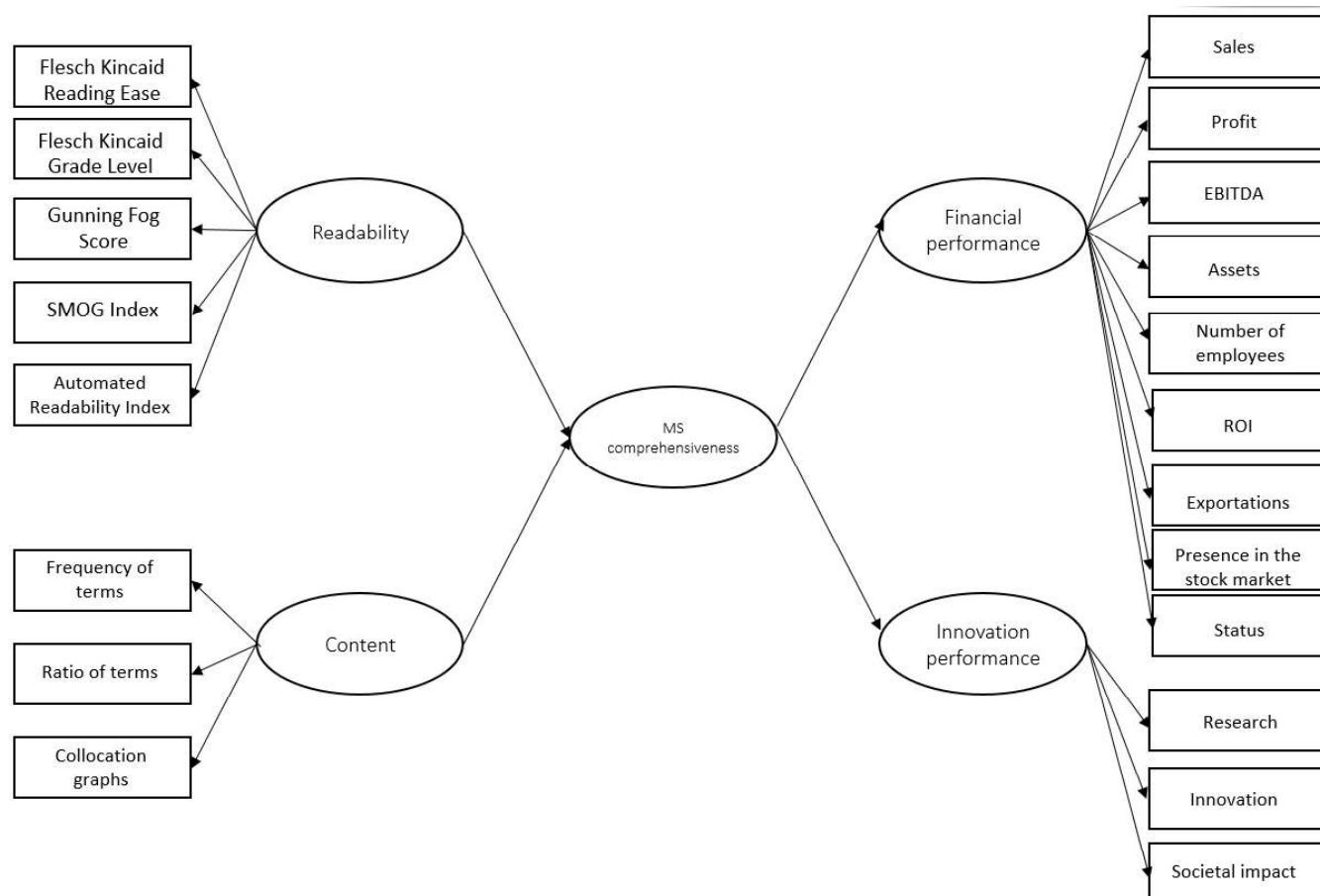


Figure 4 (Draft) structural equation model (subject to change/to be improved in the course of the research).

The regressions will determine the effects of MS comprehensiveness on either financial or innovation performance, thus the independent variables will be those related to readability indices and content key terms, and the dependent variables would be those from *América Economía* and SCImago.

## 6. Productos de nuevo conocimiento científico o tecnológico esperados

Three Q1/Q2 papers indexed in WoS/ Scopus. One focused on firms from Latin-American (*América Economía*) and two on organizations worldwide (SCImago). Optional journals:

- Research Policy (Q1/Elsevier)
- Journal of Management (Q1/SAGE).
- Journal of Business Economics and Management (Q2/Taylor and Francis-VGTU)
- REDC (Q2/CSIC)

One congress presentation and proceedings in CLADEA's (*Consejo Latinoamericano de Escuelas de Administración*) annual congress in 2019.

## 7. Productos de formación esperados

At least five students will be part of the research assistants group. If satisfactorily completed, the research assistance also serves as grade requirement for each one of them.

### 8. Estrategia de divulgación de resultados y de apropiación de los conocimientos generados

The research results will be widely disseminated via digital media and shared with the private, public and third sector. Three of the main digital channels would be:

- London School of Economics – Impact Blog (<http://blogs.lse.ac.uk/impactofsocialsciences/>): is a hub for researchers, government, and anyone else interested in maximizing the impact of academic work in the social sciences and other disciplines. This is an excellent platform where we have presented research results for a global and wide audience in previous occasions. We expect to produce at least two post on this Blog (one for each study).
- Universidad del Rosario – Communication of science strategy: we will produce infographics and audiovisual products with the support of the University's Direction of Research, also aimed to be posted also by mass media.
- Business and management specialized press: we will produce at least two detailed articles for the business and management press, either in digital or printed (e.g. Portafolio, República, Dinero, Poder, among others).

We will seek either to present our results to each board of directors of the National Association of Industry (ANDI), Colciencias, and the Colombian NGOs Confederation (*Confederación Colombiana de ONG*) or to send to them a summary (infographic) of our research for them to circulate it among stakeholders. Another alternative, is to organize a webinar to those same actors and other groups of interest, in case of agenda restrictions. The research advances will be presented in at CLADEA's (*Consejo Latinoamericano de Escuelas de Administración*) annual congress in 2019.

### 9. Impactos esperados

In practical terms, this study would be useful to any organization to identify similarities or differences on their MS and their competitors at a local or international level, while in the making of its strategic plan. Practitioners also would browse our digital open dataset to develop more effective MS according to local/regional socio-economic environment (e.g. are the MS from U.S companies related to their performance on innovation? It would be pertinent for companies from El Salvador to emulate their MS?). As we expect to find differences between the Information and Communication Technology (ICT) sector and the agricultural sector, our dataset also would bring specific patterns (to either avoid or to embrace) by practitioners according to their sector-dependence requirements.

Besides practical purposes, we will make available the dataset for the academic community for them to perform replications or conduct further studies in response to recent requirements stated by the scientific community (Aarts et al. 2015). In addition, we will perform text-mining and content analysis and visualization to integrate methods and tools from different fields such as network sciences or literature (Boyle & Hall, 2016) to triangulate and explore the data from different angles, as also argued by the scientific community (Nature editorial staff, 2016).

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**Parte III: Presupuesto y cronograma**

**1. Presupuesto**

RUBROS		FUENTE			TOTAL
		FONDO CAPITAL SEMILLA	CONTRAPARTIDA		
			ESCUELA DE ADMINISTRACIÓN	OTRO	
Personal	Jóvenes investigadores	\$ -	\$ -	\$ -	\$ -
	Asistentes de investigación	\$ -	\$ -	\$ -	\$ -
	Asistentes graduados	\$ -	\$ -	\$ -	\$ -
	Otros (Profesores tiempo completo UR)	\$ -	\$ 31.751.406	\$ -	\$ 31.751.406
Servicios Técnicos		\$ 2.000.000	\$ -	\$ -	\$ 2.000.000
Viajes y viáticos		\$ 7.136.540	\$ -	\$ -	\$ 7.136.540
Materiales y suministros		\$ 263.760	\$ -	\$ -	\$ 263.760
Salidas de Campo		\$ 533.700	\$ -	\$ -	\$ 533.700
Publicaciones y Patentes		\$ 5.066.000	\$ -	\$ -	\$ 5.066.000
SUBTOTAL		\$ 15.000.000	\$ 31.751.406	\$ -	\$ 46.751.406

1 Por favor especifique la fuente que proveerá la contrapartida en caso de que el proyecto vaya a presentarse a otras convocatorias o que exista una contrapartida de otras instituciones participantes en el proyecto.

2Incluir contratación de jóvenes investigadores, asistentes graduados, estudiantes de doctorado que participarán en el proyecto, entre otros.

3Incluir costos asociados a talleres y eventos de socialización.

4Incluir costos asociados a traducción y edición de textos para publicación, así como costos de sometimiento de artículos cuando aplica.

Especificación otros gastos:

Si la propuesta ha sido presentada o va a presentarse a otras fuentes de financiación, por favor especifique las fuentes, montos solicitados y los cambios en el alcance del proyecto si es favorecido por mayores recursos.

**2. Cronograma**

Incluir en el cronograma sólo actividades no nombre de personal involucrado en el proyecto

Número	Actividad	Desde	Hasta	Tiempo
1	Literature review (searching for research done during 2017-2018)	January-2019	February-2019	0.5
2	Data cleaning (sample 1: America Economía – Latin-American Sample)	February-2019	February-2019	0.5
3	Data processing (sample 1: America Economía – Latin-American Sample)	March-2019	March-2019	0.5
4	Data analyzing (sample 1: America Economía – Latin-American Sample)	April-2019	April-2019	0.5
5	1 <sup>st</sup> paper writing	May-2019	May-2019	1

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6	Data cleaning (sample 1: SCImago – Worldwide sample)	June-2019	June-2019	0.5
7	Data processing (sample 1: SCImago – Worldwide sample)	June-2019	June-2019	0.5
8	Data analyzing (sample 1: America Economia – Latin-American Sample)	July-2019	July-2019	0.5
9	2 <sup>nd</sup> paper writing Paper submission to CLADEA 2019	August-2019	August-2019	1
10	Organizing pre-print versions of both papers	September 2019	September 2019	0.25
11	Pre-print submitting of both papers	September 2019	September 2019	0.05
12	Papers summiting to journals	September 2019	September 2019	0.2
13	Preliminary results diffusion (LSE impact Blog; U. Rosario science diffusion; Business specialized press)	October 2019	October 2019	1
14	Organizing meetings/Webinar with stakeholders	September 2019	September 2019	0.5
15	Assisting meetings/Webinar call	November 2019	November 2019	1
16	Webinar	November 2019	November 2019	0.05
17	Production of audiovisual/printed material for scientific diffusion	September 2019	November 2019	3