CONTRACT ENFORCEMENT IN URUGUAY DURING THE FIRST GLOBALIZATION: A METHODOLOGICAL PROPOSAL AND SOME COMPARISONS

CUMPLIMIENTO DE LOS CONTRATOS EN URUGUAY DURANTE LA PRIMERA GLOBALIZACIÓN: UNA PROPUESTA METODOLÓGICA Y ALGUNAS COMPARACIONES

Carolina Román[*]
Henry Willebald[**]

Abstract

Economic history, as well as current growth and development theory, recognises that institutions matters to explain the long run economic development. However, how to measure the process is a controversial issue and it prompts a vigorous discussion. The aim of this article is to estimate one of the institutional quality indicators proposed by the literature, the contract-intensive money" (CIM), for Uruguay during the First Globalization (1870-1913). Actually, this is an indirect measure of the contract enforcement and we evaluate its reliability running two exercises. On the one hand, we consider how representative the trajectory of the indicator in Uruguay is during the First Globalization in a historical perspective. On the other hand, we compare the Uruguayan CIM evolution with other settler economies and other institutional quality indicators. We conclude that CIM is an adequate indicator of institutional quality, in terms of enforcement of contracts, with the advantage of its simplicity on the construction for long-run periods and results useful to offer an overview of the institutional evolution.

Keywords: contract enforcement, CIM, institutional quality indicators, Uruguay.
JEL Classification Number*:* N16, N26, N46

Resumen

La historia económica –y, en general, las teorías del crecimiento y del desarrollo– reconocen la importancia de las instituciones para explicar el desenvolvimiento económico de largo plazo. Sin embargo, la medición del proceso es todavía un asunto controversial y continúa abierta la discusión. El propósito de este artículo es estimar uno de los indicadores de calidad institucional propuestos en la literatura –*Contract Intensive Money* (CIM)– para Uruguay durante la Primera Globalización. Este indicador constituye una medición indirecta del *enforcement* de los contratos y se evalúa su fiabilidad mediante dos ejercicios. Por un lado, se considera cuán representativa es la evolución del indicador del proceso histórico llevado por Uruguay durante el período. Por otro lado, se comprara dicha evolución con los mismos indicadores de otras economías de reciente asentamiento y con otros indicadores de calidad institucional (Polity IV). La conclusión es que el CIM es un indicador adecuado de calidad institucional, en términos del enforcement de los contratos, con la ventaja de ser sencillo y que es posible su construcción para períodos largos. De ese modo, permite contar con una panorámica histórica del país que, en conjunto con otros indicadores, podría representar su dinámica institucional.

Palabras claves: *enforcement* de los contratos, CIM, indicadores de calidad institucional, Uruguay.
JEL Classification Number: N16, N26, N46

*   croman@iecon.ccee.edu.uy
Instituto de Economía, Facultad de Ciencias Económicas y de Administración, Universidad de la República, Uruguay
** hwillebald@iecon.ccee.edu.uy
Instituto de Economía, Facultad de Ciencias Económicas y de Administración, Universidad de la República, Uruguay

1. INTRODUCTION

Development economics, as well as economic history, recognises that the neoclassical theory has provided limited scope in understanding economic growth and the divergence and convergence of incomes (and other welfare measures) among economies. Institutions have become central in recent theoretical and empirical works as they are seemed as having fundamental long-term impacts on development (Acemoglu et al., 2002, 2004; Acemoglu & Robinson, 2006; Glaeser, et al., 2004; Rodrik et al., 2004). Although there is a widespread belief that institutions matter, how to measure the quality of the process (or, at least, the incidence on growth and other dimensions of development) is a critical issue and arises controversial positions about it (see Voigt, 2013, for a recent discussion; and Siniscalchi, 2014, for a literature review).

The aim of this article is to estimate one of the institutional quality indicators proposed in the literature, the "contract-intensive money" (CIM) indicator, in the case of Uruguay during the First Globalization. This indicator has been used as an indirect measure of the contract enforcement under the assumption that the relative use of currency can bring an idea of the extent to which societies rely on contract enforcement and property rights (Clague et al., 1999). This indicator is based on financial variables and has two main advantages: (i) definition and construction are simple and usually it illustrates a representative evolution of the institutional trajectory of economies; (ii) information requirements are lower compared to other methodological options because only need to account with monetary data (mainly money supply and currency in circulation), which usually is available for long periods (even in developing economies).

The Uruguayan statistical system counts on consistent and continuous monetary time series from 1912 onwards (Román, 2010) but for the previous period, there is no systematic information and the data is incomplete which had impeded the construction of monetary indicators. Our efforts pay attention to this shortage and elaborate statistical series of money supply in order to construct the CIM for Uruguay. This period –commonly identified with the First Globalization– is not neutral for the economic history of Uruguay and to provide an institutional indicator for those years constitutes our first motivation.

The First Globalization constituted an essential period of Uruguayan economic history because of two reasons: (i) it characterized the expansion of the capitalism through the Atlantic economy combining a process of western land frontier expansion (Webb, 1964), huge flows of labour and capital (Williamson, 2000, 2002), deep transport technological changes (Mohammed & Williamson, 2004) and transcendent institutional innovations in the New World that meant the conformation of a new institutional structure in terms of definition, specification and enforcement of property rights; (ii) Uruguay became a protagonist in this process and integrated that *"group of non-European countries which at the* [beginning of the] *twentieth century can be classified as developed"* (Foreman-Peck,1995, p.105). We identify this "club" with the "settler economies" as that group of countries that Lewis (1983, p.209) identifies as *"template economies"* (it includes countries such as Argentina, Australia, Canada, Chile, New Zealand, South Africa, the United States and Uruguay).

We have a second motivation for our study. The CIM indicator we elaborate has been used in other works (Fleitas et al., 2013; Siniscalchi, 2014) rendering satisfactory results and we believe it can be useful for future research about monetary issues, public policy and economic performance. Therefore, it was a must to count on a published data with the methodological explanation available for the academic community.

After this introduction, the article is structured as follows. In the next section we present briefly the discussion on institutions and some of the indicators usually proposed to measure the institutional quality (Section 2). Afterwards we detail in depth the data availability in Uruguay to construct the CIM indicator (Section 3). In order to validate the indicator two approaches are used (Section 4). First, we consider a long-run analysis –First Globalization and beyond– to contrast the trajectory of the indicator with the economic evolution of Uruguay and discuss its historical consistency. Second, we compare the evolution of the indicator in Uruguay with other settler economies and with other measures of institutional quality (Polity IV) during the First Globalization. With the first comparison, we evaluate if the evidence is consistent with those institutional differences usually awarded to understand economic performance discrepancies between ex-Spanish and ex-British colonies. With

the second comparison, we evaluate how consistent is the measure in relation to alternative indicators. Finally, we outline the main limitations of the indicator and conclude (Section 5). At the end, the references and the appendix with the complete series including official data (1912-2010) and our estimates (1870-1912) are offered.

2. INSTITUTIONAL QUALITY: CONCEPTS AND INDICATORS

Institutions comprise a multitude of ideas and concepts which mostly overlap responding to different approaches. Terms such as governance, property rights, transaction costs, civil capital, rule of law, and so on, capture at least part of what is referred to as institutions. Williamson (2000) proposes an idea of how institutions may be deconstructed into different layers, from informal institutions, customs, traditions, norms, religion in one extreme (on line with the Social Theory) and with the resource allocation and employment in the other (Neo-Classical Economics and Agency Theory), through the institutional environment represented by formal rules in terms of property rights (polity, judiciary, bureaucracy) and governance (contracts). Recent literature approaches to institutional quality using two dimensions: rules vs. outcomes; and property rights vs. contracting institutions (Boschini et al., 2013).

On the one hand, many authors have pointed out that some measures of institutions often used actually reflect actions (or restraints) by governments rather than actual rules constraining their behaviour (Glaeser et al., 2004). On the other hand, it is possible to distinguish between "property-rights institutions" –which protect citizens and firms against expropriation by the government– and "contracting institutions" –which enable private contracts between agents (Acemoglu & Johnson, 2005).

How can we compare the quality of rules, norms, and ethics? Recent literature show more interested on the quality of institutions and proposes a wide spectrum of indicators based, fundamentally, on questionnaires and the opinion of experts. The somewhat complex term "institutions" is disaggregated into many sub-categories, such as rule of law, political stability, bribery or bureaucratic quality. Depending on the source, the results are checked by peer reviews for coherence and comparability across countries. A majority of studies refer to these indicators, such as Knack & Keefer (1995, 1997) as one of the most known.

These indicators consist of systematic subjective ratings generated by specialists to provide different agents (typically politicians and investors) with measures of political and institutional risks, governance and democracy. However, considering that they are the results of value judgments and entail evolutions in which periods of absolutely stability are interrupted with sudden jumps, their application for long-run analysis presents disadvantages.

As Clague et al. (1999, p.187) stay, the government has four crucial roles to play in contract enforcement and the protection of property rights: (i) it provides third-party enforcement when no self-enforcing mechanism exists; (ii) it may be the entity that communicates the branches of the contract; (iii) it may enforce the arrangement that private agents apply to constitute themselves as a formal group; and (iv) the government ensure peace. These authors argue that to capture the potential gains of those activities intensive in contract enforcement and property rights it is possible to use the relative use of currency applying the concept of "contract-intensive money" (CIM). They define CIM as the ratio of non-currency money to the total money supply.

The application of these ideas to settler economies is not new. Prados de la Escosura & Sanz-Villarroya (2009) use this concept to evaluate the role of the institutional arrangements in the long-run decline of Argentina, comparing the evolution of the CIM with the cases of Australia and Canada. Both Clague et al. (1999) and Prados de la Escosura & Sanz-Villarroya (2009) argue about the fit goodness of these indicators and the evidence appears to be convincing. *"CIM is a reflection or measure of the type of governance that improves economic performance rather than a cause of that performance"* (Clague et al., 1999, p. 189) and, in this sense, can operate as an instrumental variable in the historical analysis.

3. DATA AND SOURCES

As previously discussed we will follow Clague et al. (1999) and expressed the ratio $CIM=(M_2-C)/M_2$ where M_2 is a broad definition of the money supply and C is currency in circulation (held outside banks). The availability of monetary statistics for the 19th century and the early decades of the 20th century is disperse in Uruguay. Actually, we can rely on systematized information of money supply since 1912 which is available on different publications of the central bank. Therefore, the most interesting contribution of our series of CIM is concentrated on the previous period, from 1870 to 1911. For these decades, we collect several statistics such as official publications, secondary information and indirect measures to elaborate continues time-series of currency in circulation and short-term and long-term bank deposits. These are the three components of the broad definition of money supply referred as M2. Once we construct the CIM indicator for 1870-1911, we calculate five-year moving average to smooth the evolution because the original series present abrupt movements mostly due to the limitations of our construction. The series was then splice with the time-series reconstructed with official information from 1912 onwards.

All the sources and variables used, since 1870 up to the present, are detailed in the following sub-sections.

3.1 CURRENCY IN CIRCULATION

The context of banking regulation during the 19th century in Uruguay can be described as a free-banking system (banks were free to issue paper currency in *pesos* once they had the permission of the authorities). The Law of Banks of 1865 (*Ley de Bancos)* established some general regulations for the banking system. The private banks interested to start working in the country were required to ask for authorization to the executive power (that was, at that time, the organism in charge of the duties of the monetary authority) and to meet some requirements in terms of the convertibility of currency and capital[1]

In 1896 the state-owned bank *Banco de la República Oriental del Uruguay (BROU)* was created and become the only institution admitted to issue money. However, in fact, the emission monopoly of this bank did not start until 1907, when the permission of other private banks expired.[2] Therefore, since 1907, the monopoly of the emission belongs to *Banco de la República*.

Under this context, we used different sources to estimate the-time series of the currency in circulation. From 1912 onwards we take the data of currency in circulation from different publications of the central bank (*Banco Central del Uruguay*). For the years form 1900 to 1911 we consider the variation of total money issued that comprise the sum of currency in circulation and the money held by the banks (both information is provided by Banco Central del Uruguay, 1971). Previous to 1900, the information is not systematized so we rely on the figures of money (issued by the banks) reported by several authors as detailed in Table 1 (Acevedo 1933, 1934; Arocena & Graziani, 1987). For those years where we lack of information –1869, 1877, 1878, 1879 and 1881– we calculate lineal interpolations.

TABLE 1

Currency in circulation 1870-2010: data description and sources

Period	Data description	Source
1870	Data correspond to total money issued.	Arocena & Graziani (1987: p.20) which in turn is taken from Vaillant (1873: p.275).
1871-1874	1871: currency in circulation in December of the following banks: *Comercial, Londres y Río de la Plata, Mauá, Navía, Oriental and Franco-Platense*. 1872: currency in circulation in December of the following banks: *Comercial, Londres y Río de la Plata, Mauá, Navia, Oriental* (the bank *Franco-Platense* has gone bankrupted) 1873 and 1874: currency in circulation in December	Acevedo (1933: p.732).
1875	Total currency issued.	Acevedo (1934: p. 71).
1876	Currency issued in April.	Arocena & Graziani (1987: p.20) taken from *Anuario Estadístico de la República Oriental del Uruguay*, año 1882, Montevideo 1883: p. 293.
1880	Currency in circulation.	Acevedo (1934: p.216).
1882	Currency in circulation at the end of the year	Acevedo (1934: p.320).
1883-1886	Currency issued in March of the following banks: *de Londres y Río de la Plata, Comercial and Inglés del Río de la Plata*.	Acevedo (1934: p.322).
1886-1891	Total currency issued in December. 1886-1887: Currency issued of the following banks: *Comercial, de Londres and Inglés del Río de la Plata*. 1888: the same banks with the exception of *Banco Comercial, and Banco Italiano*. 1889-1891: the same banks plus *Banco de España*.	Acevedo (1934: p.547).
1892-1893	Total currency issued in December. *Banco Nacional, Banco de Londres, Banco Italiano and Banco de España*	Arocena & Graziani (1987: p.20) taken from *Anuario Estadístico de la República Oriental del Uruguay,*.
1894-1900	Currency issued in December, reported by the balance sheet of the banks *Italiano, Londres, and Banco de la República*.	Guerra et al. (2008: p.134) taken from Acevedo (1934: Tomo 5).
1900-1911	Total currency issued by the following banks. 1900-1904: *Italiano, Londres and Banco de la República* 1905-1906: *Banco Italiano* and *Banco de la República* Since 1907: *Banco de la República* (who has the monopoly of the emission)	Banco Central del Uruguay (1971).

1912-1970		Banco Central del Uruguay (1971).
1971		Banco Central del Uruguay (1974)
1972-1973		Banco Central del Uruguay (1982)
1974-1977		Banco Central del Uruguay (1987)
1978-1985	Currency held outside banks	Banco Central del Uruguay (1990)
1986-1989		Banco Central del Uruguay (1994)
1990-1997		Banco Central del Uruguay (2002)
1998-2010		Banco Central del Uruguay, data online: http://www.bcu.gub.uy

3.2 BANK DEPOSITS

To obtain systematic figures of the bank deposits we get advantaged from several sources. For the post-1912 period, we use data of total bank deposits from Banco Central del Uruguay (1971) and other official publications (Banco Central del Uruguay 1974, 1982, 1987, 1990, 1994 and 2002), calculated as the result of money supply less currency in circulation. For the previous years there is lack of systematic information on total deposits in the bank system, so we make a reconstruction of the records based on secondary information. We count on two types of sources as detailed in Table 2.

On the one hand, Acevedo (1933, 1934) present data of the creditors, but only the ones belonging to those banks that also issued money.[3] On the other hand, the Statistical Yearbooks (*Anuarios Estadísticos de la República Oriental del Uruguay*) report data of creditors based on information of the balance sheets of the banks (those that issued money), however this information is neither exhaustive nor continuous. Taking into account these limitations we proceed as following. For 1903-1911 the estimation of bank deposits are based on the yearly change in total bank deposits but just of the *Banco de la República*.[4] The series for 1888-1903 are based on the variation of the deposits in all banks reported in the Statistical Yearbooks. For the years 1883-1887, 1870-1874 and 1869 we worked with the variation of deposits, but just those figures belonging to the emission banks, using the data reported in Acevedo (1933). The gaps in the data (1870, 1875-1882) were filled with lineal interpolations.

TABLE 2

Bank deposits 1870-2010: data description and sources

Period	Data description	Source
A) Data from Acevedo (1933, 1934), Volume III and IV		
1871-1874	Total creditors in August of the following banks. 1871: *Comercial, Londres y Río de la Plata, Mauá, Navía, Oriental* and *Franco-Platense*. 1872: *Comercial, Londres y Río de la Plata, Mauá, Navia, Oriental* (*Banco Franco-Platense* went bankrupted). 1873- 1874: total creditors.	Acevedo (1933: Tomo III, p.731)
1883-1886	Creditors corresponding to the following banks: *Londres y Río de la Plata, Comercial* and *Inglés del Río de la Plata*.	Acevedo (1934: p. 322).
B) Data from *Anuarios Estadísticos*		
1886-1911	Total creditors of the banks reported in the statistical yearbooks: *Banco Naciona*l: 1887-1895 *Banco de la República*: 1896-1915 *Banco de Londres y Río de la Plata*: 1885-1903 *Banco Italiano*: 1888-1903; 1908-1914 *Banco Comercial*: 1885-1886; 1905-1915 *Banco Inglés y Río de la Plata*: 1886-1890 *Banco España* and *Río de la Plata*: 1888-1892, 1898-1903 *Banco Italo-Oriental*: 1890-1891 *Banco Popular*: 1904-1914.	*Anuarios Estadísticos de la República Oriental del Uruguay*, several years.
1912-1913	Deposits in national currency (short-term and long-term deposits).	Banco Central del Uruguay (1971).
1972-1973		Banco Central del Uruguay (1982)
1974-1977		Banco Central del Uruguay (1987)
1978-1985		Banco Central del Uruguay (1990)
1986-1989		Banco Central del Uruguay (1994)
1990-1997		Banco Central del Uruguay (2002)
1998-2010		Banco Central del Uruguay, data online: http://www.bcu.gub.uy

# 4. DISCUSSION: SOME CONJECTURES AND COMPARISON WITH SETTLER ECONOMIES

According to Clague et al. (1999) the importance of using CIM is based on the following: (i) the ratio is a measure of the proportion of transactions that rely on third-party enforcement; (ii) this proportion is a good indicator of the reliability of contract enforcement and the security of property rights; and (iii) contract enforcement reliability and property rights security are important for high levels of productivity and rapid economic growth. The authors organize a burden of evidence that is consistent with these assumptions. In some cases there are impressive modifications in politics and governance, and CIM changed in ways compatible with these propositions. CIM also appeared to be correlated with other subjective measures of the quality of governance and institutions that are widely used in the literature. Prados de la Escosura & Sanz-Villarroya (2009) propose similar exercises to analyze the long-run evolution of Argentine economy (from 1863 to 2003) compared to Australia and Canada.

Our strategy is different but goes in the same direction. We discuss the evolution of the CIM indicator during the period of the First Globalization in the light of the historical evidence and comparing with the following stages of the Uruguayan economic development. Afterwards, we concentrate in that period and compare the Uruguayan evolution with other settler economies and institutional indicators to understand the movements and to identify different patterns.

4.1 CIM IN HISTORICAL PERSPECTIVE: FIRST GLOBALIZATION AND BEYOND

The first step to discuss the reliability of the CIM is to analyze the performance of the indicator in historical perspective. Figure 1 describes the evolution of the CIM in the very long run from 1870 to 2010 (data and sources were explained in section 3, and the series is presented in the Appendix). At first glance, the series of CIM shows a three-arch-shape evolution that, *grosso modo*, coincides with the three phases of the Uruguayan development: "export led-growth" (corresponding to the First Globalization, from the last quarter of the 19th century to the 1920s), "import substitution industrialization" (from the previous years to Second World War, WWII, to the end of the 1950s) and "reglobalization" (from the second half of the 1970s onwards)– mediated for two transition periods –with the Great Depression of the 1930s and the "stagflation" of the 1960s (Figure 1).[5] What does the CIM indicator tell us about the institutional evolution?

FIGURE 1
Uruguay: Contract Intensive Money (CIM) Indicator 1870-2010
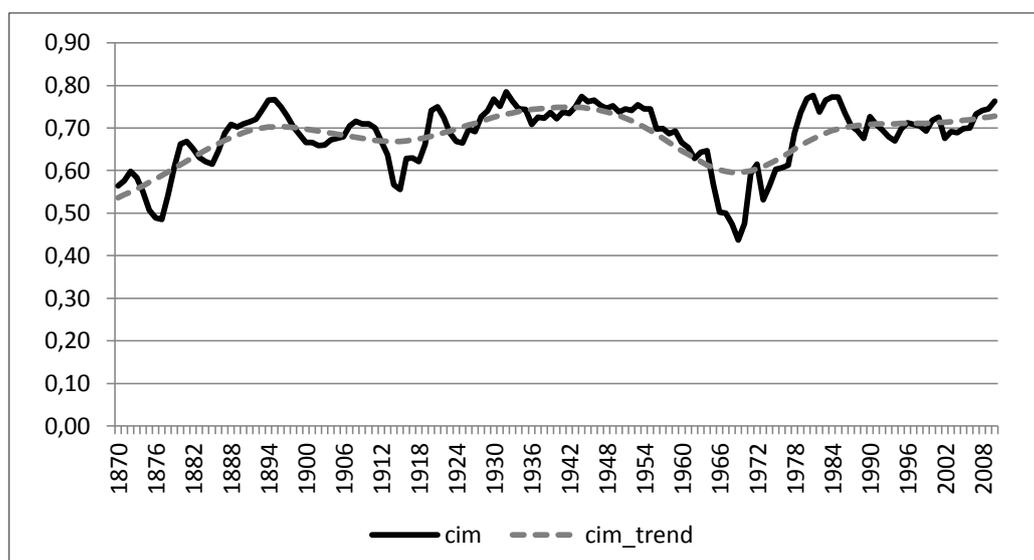
Source: own estimates. See section 3 for details on sources.
Note: the trend of the indicator was calculated using Hodrick-Prescott filter.

The "volatility" of the early trajectory and the absence of a definite trend take place within a period of high institutional instability, with internal conflicts and a weak central government that characterized the Uruguayan economy until, at least, the first decade of the 20th century (Nahum 1993).[6] These dynamics changed after the First World War (WWI).

After the conflict, CIM increased towards the beginning of the 1930s, when it declined reflecting the instability associated with a deep depression and the first military dictatorship of the 20th century led by President Gabriel Terra (Jacob, 1983). Since the 1940s, the indicator maintained a relative steady level through the 1950s, which is consistent with a stable sociopolitical context, with a consolidated democracy and a relatively large welfare state inserted in the "golden age" of the Uruguayan industrial development. However, the upcoming economic stagnation and increasing political and social instability of the 1960s, together with an increasing informal financial intermediation that meant net disintermediation (Vaz, 1999), initiated a deep downward trajectory of the CIM indicator until the end of the decade.

During the next ten years, CIM recovered in a context characterized by important political changes, new macroeconomic strategies (exchange rate based stabilization; liberal measures such as the reduction in import restrictions; removal of financial repression factors; and low prudential regulation and supervision in the banking system). During those years CIM approached the levels of the 1940s. However, it fell again in the early 1980s in an environment of high uncertainty associated to a severe financial and external debt crisis (Antía, 1986; Vaz, 1999) and the collapse of the fixed exchange rate regime. After this negative shock, the trajectory was relatively stable until 2006, and since 2007 the ratio has increased in a period of macroeconomic stability, increasing confidence and better performance of the social indicators. At sum, in general, our indicator seems to follow a plausible path, considering the broad-brush socio-political and economic scenarios of the last one hundred and forty years.

4.2 COMPARISON WITH OTHER RECENT SETTLEMENT SOCIETIES

Previous studies (Willebald, 2007; Willebald & Bértola, 2013; Willebald, 2011) propose a comparative approach presenting the evolution of the Uruguayan economy within the "club" of regions of recent European settlement. Several features of the countries of the club make attractive the comparison in historical perspective (19th and 20th centuries). Their economic and social developments presented parallel paths as a result of similar dynamic relations between waves of immigration, marginalization of native people, European capital inflows, land abundance, free labour (at least after the middle 19th century), socially-useful political institutions, and the development of neo-European cultures (Lloyd & Metzer, 2013). By the late 19th century the settler economies were well integrated into the global economy. In fact, the main settler zones in North America, southern South America, Australasia, and the southern and northern regions of Africa had become essential to the development of the global economy that had its initial focus on the British Islands and later on the industrialization of several other European countries.

We classify the countries of the club in two groups (Figure 2). One group is conformed by those economies that present high levels of the indicator and a persistent increasing trajectory: Australia, Canada and New Zealand. Canada begun the period with relatively low levels (0.4) but showed some kind of "convergence" process achieving levels over 0.8 in the 1890s (see sources and methodology in Appendix). This successful performance was not repeated by the other three economies. In the cases of Argentina, Chile and Uruguay irregular trajectories predominated, with positive trends that did not allow converging with the other partners of the club.

FIGURE 2
CIM in settler economies (1870-1920)
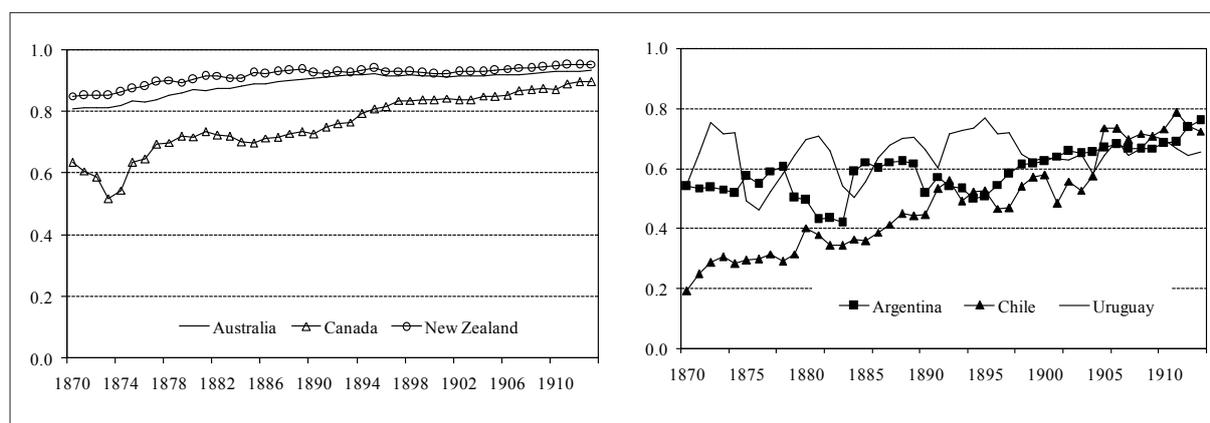
Source: see Appendix.

Studies are abundant about the differences in terms of institutional quality between these ex-British and ex-Spanish colonies of the Atlantic economy.[10] In recent literature, the discrepancies in terms of development within the "club" have been explained by the institutional matrix that produces a set of organizations, rights and privileges; the stability of the structure of exchange relationships in political and economic markets; and a state that provides (or not) a set of political rules and promote the enforcement of rights. In general, studies contrast the experience of Latin America vs. North America and they propose concepts as disorder vs. order in the economic change (North et al., 2000), the "South American way" (Landes, 1998, p. Ch. 20), cultural heritage (North, 2003) and different ways of organizing a society (a social order) identified with a "limited access order" (North et al., 2010). The application of these concepts to contrast the South American Southern Cone countries –characterized by "bad" institutions– with the ex-British colonies is straightforward. Referred to Uruguay and New Zealand –but extensible to, respectively, South American and ex-Brtitish colonies of our club–, some scholars demonstrate that the divergent path "*can be explained by the existence of different institutions governing the agricultural sectors of the* [two] *countries, which in turn generated different distributions of both land property rights and product shares in the agricultural sector*" (Álvarez et al., 2011, p. 165) (see, besides, Álvarez & Willebald, 2013). Evolutions of the CIM indicators are consistent with these insights.

A complementary exercise is to contrast the evolution of the CIMs with those corresponding to the Polity IV[7] (Figure 3). The "Constraints on executive" data base is accessible through the Integrated Network for Societal Conflict Research (INSCR), and it considers a wide sample of countries from the middle 19th century to the present.

FIGURE 3
CIM and POLITY IV indicators in settler economies (1860-1915)
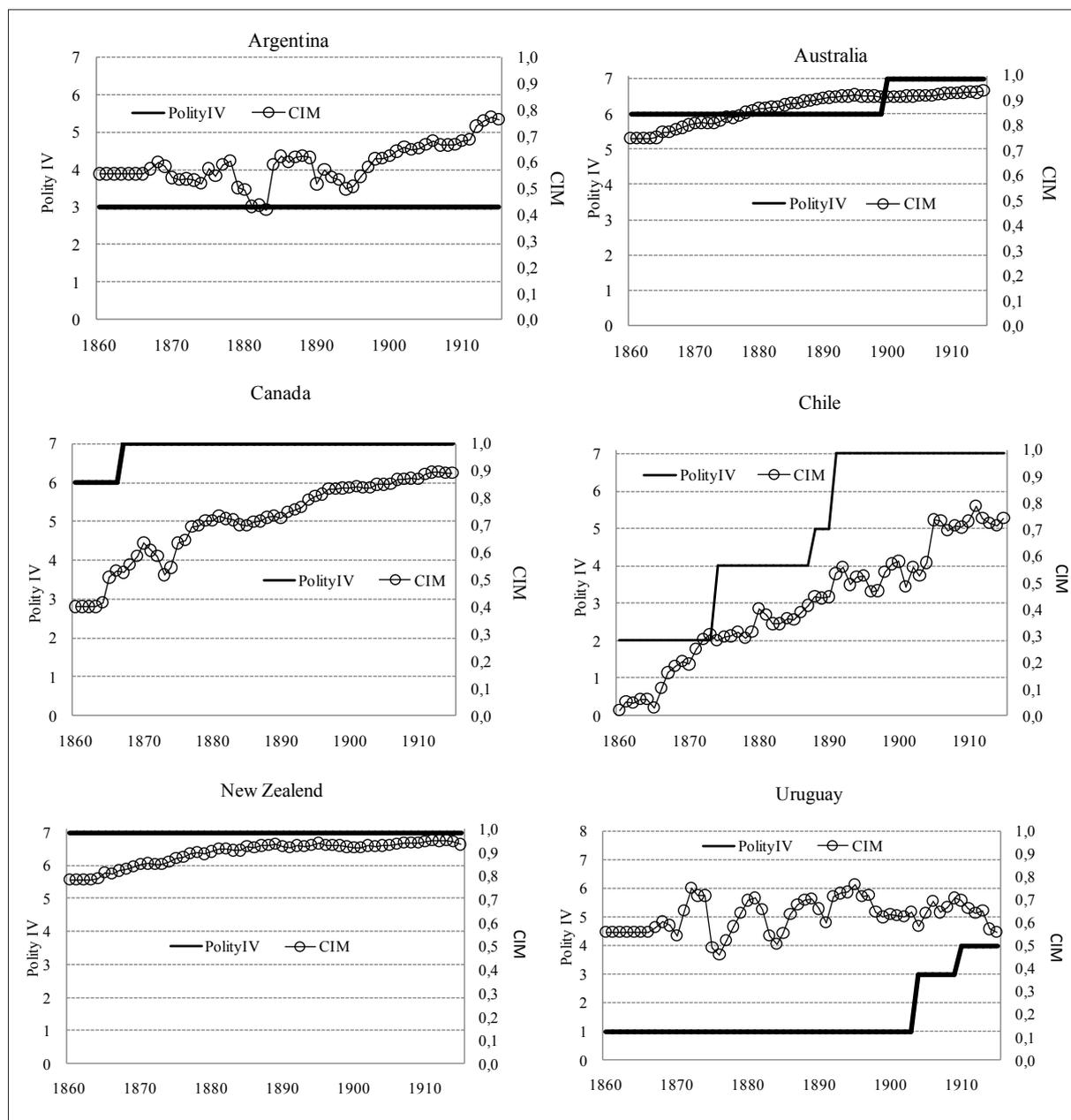
Sources: see the Appendix

"Constraints on the executive" is a measure of historical political institutions and is defined as the extent that institutions can restrict the decision making powers of the chief executive, whether individual or collective. According to Marshall & Jaggers (2009), in a democracy, constraints would come from the legislative or judicial branches of government. In a dictatorship, constraints may come from the ruling party in a one-party system, military coups, a council of nobles or powerful advisors. The extents of constraints on the executive are coded from 1, meaning "unlimited executive authority" to 7, which is "executive parity or subordination". A country would be in the first category if "constitutional restrictions on executive action are ignored", or if "there is no legislative assembly, or there is one but it is called or dismissed at the executive's pleasure". A country would be in the latter category if "a legislature, ruling party or council of nobles initiates much or most important legislation" or if "the executive is chosen by the accountability group and is dependent on its continued support too remain in office" (Marshall & Jaggers, 2009, pp. 67-68).

The trends of both measures –Polity IV and CIM– may be comparable and show compatible results. On the one hand, Argentina and Uruguay presented the worst institutional performance with low levels and meagre improvements while Chile showed the clearest institutional advance in the South American Southern Cone. On the other hand, Australia, Canada and New Zealand show the best institutional performance of the period.

5. FINAL COMMENTS

One of the main weaknesses of the CIM as an indicator of contract enforcement is the fact that it reduces the complexity of the institutional arrangements (in composition and changes) to "one number" (Chang, 2011) which minimizes the analytical richness of the concept. However, our objective is not to explain the institutional conformation of the economy but only to propose an indicator that can contribute with the analysis of the institutional change and the economic performance. In this sense, CIM is proposed as a proxy for measuring one of the multiple aspects of the institutional quality related to the contract enforcement.

An additional limitation of the indicator is related with the historical specificity of developing regions. Several developing countries, and specially Argentina, Chile and Uruguay, experienced huge monetary and exchange rate crises during their histories that would have induced movements in CIM not concerned with institutional issues but with banking and financial problems. This consideration would be especially relevant to understand some abrupt movements of the index, such as the deep reduction of indicator in the 1960s when the Uruguayan economy experienced high inflation with an increasing substitution of local currency assets by assets denominated in foreign currency (dollars). In next steps of our research we will propose corrections of the CIM indicator in order to get rid of those movements that biased the interpretation (our proposal is to construct a "CIM adjusted by inflation").

In spite of these limitations, the CIM indicator becomes an interesting –and relatively simple to construct in the long run– representation of a particular aspect of the institutional quality evolution that renders stimulating results even in comparative terms. The complexity of measuring institutional performance suggests resorting to a battery of indicators and CIM maybe one of these indexes.

This research has thrown up an indicator that could be useful to study several problems of the economy, which were not the scope of this research. It will be interesting to use the CIM to study the discretional policy (discussed by Aboal & Oddone, 2003; Aboal & Moraes, 2003), the constitutional design and the electoral dynamics (Shugart & Carey 1992); the analysis of the economic performance in the long-run (in the same vain as Prados de la Escosura & Sanz 2009); or the relation with the monetary policy, money market and inflation (studied by Brum et al. 2014). These are topics for our future research agenda.

NOTES

1 Further explanations about the banking system in Uruguay during the late 19th century can be found in Jacob (1981, pp. 283-290) and Damonte & Saráchaga (1971, pp. 27-30).

2 The permission of the *Banco de Londres* finished in 1905 while the one of Banco Italiano expired in 1907.

3 Even though the item creditor includes more than deposits, such as current accounts, etc., we will use it as a proxy of deposits.

4 We only consider the figures of Banco de la República because is the most continuous information we found for this period.

5 We analyze the stylized evolution using the trend of the series with the aim to capture changes in the permanent trajectory of this indicator, trying to get rid of the short-run shocks (derived from supply and demand shocks and movements in the relative prices).

6 The last armed civil uprising in Uruguay occurred, precisely, in 1902-1904. It was led by the "caudillo" Aparicio Saravia who headed the military forces of the political opposition (Partido Blanco) to the governmental order (Partido Colorado).

7 "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2008" is a program that provides information for coding the authority characteristics of states for purposes of comparative and quantitative analysis (http://www.systemicpeace.org/polity/polity4.htm).

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APPENDIX

A.1 Contract-intensive money (CIM) for settler economies: sources

$CIM=(M_2-C)/M_2$ where M_2 is a broad definition of the money supply and C is currency maintain by people (outside banks).
- o Argentina, Australia and Canada came from Prados de la Escosura & Sanz Villarroya (2009). Data kindly provided by the authors.
- o Chile: own elaboration. Data derive from Jeftanovi et al. (2003).
- o New Zealand: own elaboration. Data derived from Statistics New Zealand-Long Term Data Series (SNZ-LTDS) based on Bloomfield (1984) and own estimates. Source reports notes and coins held by the public since 1935 and, for the previous years (1875-1934), the category considers notes in circulation. SNZ-LTDS presents M_2 data for 1877-1913 and, for the previous years, the series is retropolated by the movement of M_1 series.

A.2. CIM series for Uruguay 1870-2010

year	CIM=(M2-C)/M2	year	CIM=(M2-C)/M2	year	CIM=(M2-C)/M2
1870	0,56	1917	0,63	1964	0,65
1871	0,58	1918	0,62	1965	0,57
1872	0,60	1919	0,66	1966	0,50
1873	0,58	1920	0,74	1967	0,50
1874	0,55	1921	0,75	1968	0,47
1875	0,51	1922	0,72	1969	0,44
1876	0,49	1923	0,69	1970	0,48
1877	0,49	1924	0,67	1971	0,59
1878	0,54	1925	0,66	1972	0,62
1879	0,61	1926	0,70	1973	0,53
1880	0,66	1927	0,69	1974	0,56
1881	0,67	1928	0,73	1975	0,60
1882	0,65	1929	0,74	1976	0,61
1883	0,63	1930	0,77	1977	0,61
1884	0,62	1931	0,75	1978	0,69
1885	0,62	1932	0,79	1979	0,74
1886	0,65	1933	0,76	1980	0,77
1887	0,69	1934	0,75	1981	0,78
1888	0,71	1935	0,74	1982	0,74
1889	0,70	1936	0,71	1983	0,77
1890	0,71	1937	0,73	1984	0,77
1891	0,72	1938	0,72	1985	0,77
1892	0,72	1939	0,74	1986	0,73
1893	0,74	1940	0,72	1987	0,70
1894	0,77	1941	0,74	1988	0,69
1895	0,77	1942	0,73	1989	0,68
1896	0,75	1943	0,75	1990	0,73
1897	0,73	1944	0,77	1991	0,71
1898	0,70	1945	0,76	1992	0,70
1899	0,68	1946	0,77	1993	0,68
1900	0,67	1947	0,75	1994	0,67
1901	0,67	1948	0,75	1995	0,70
1902	0,66	1949	0,75	1996	0,71
1903	0,66	1950	0,74	1997	0,71
1904	0,67	1951	0,75	1998	0,71
1905	0,68	1952	0,74	1999	0,69
1906	0,68	1953	0,76	2000	0,72
1907	0,70	1954	0,74	2001	0,73
1908	0,72	1955	0,75	2002	0,68
1909	0,71	1956	0,70	2003	0,69
1910	0,71	1957	0,70	2004	0,69
1911	0,70	1958	0,69	2005	0,70
1912	0,67	1959	0,69	2006	0,70
1913	0,64	1960	0,67	2007	0,73
1914	0,57	1961	0,65	2008	0,74
1915	0,56	1962	0,63	2009	0,74
1916	0,63	1963	0,64	2010	0,76

Sources: see section 3 of the text with details on data and sources.