POSTS-INDEPENDENCE INSTITUTIONS IN LATIN AMERICA AND ECONOMIC PERFORMANCE IN THE 20TH CENTURY

Lina María Henao Gutiérrez[1]

Faculty of Economics

Universidad de los Andes

Advisor: Fabio Sánchez

June 28, 2011

SUMMARY

This document reviews the importance of institutional design in the new Latin American republics and its long-term repercussions on the economic performance of the region and finds that the depth, the quality and the speed with which institutional reform was carried out after independence had a positive and significant effect on the income per inhabitant of each nation. It also evaluates the impact of the colonial institutions and shows that, although the colony was decisive in the entry paths of the region, it was not due to its direct impact but instead to the legacy that it left in the institutions of the rising republics. This legacy translated into low executive constraints, a poorly representative elite and scarce property rights, which prevented the young republics from taking advantage of economic opportunities derived from world trade. The maximization of the benefits offered by trade determined the success or failure of the nations. The creation of an index of institutional trajectories from 1850 to 1899 allows for the verification of the positive relationship between better institutions in the 19th century and greater economic performance in the 20th century, through international trade.

Key words: Institutions, colony, independence, Latin America, growth, trade.
JEL classification codes: N26, N46, N96, O11 and O43.

I. INTRODUCTION

After the independence of the Latin American colonies, the gap between the region and industrialized countries, which was already wide by then, was further broadened after the birth of the young republics. Three centuries after Columbus arrived to the Indies, the economic differences between the regions of the New World were already significant. In 1850, the product per capita in the United States was 1.7 times higher than the income per capita of Latin America, and by 1900 it was 2.3 times higher. Despite Latin America experienced moderate growth rates after 1870, the gap remained and in the last decades of the 20th century their economies diverged even more from those that were already industrialized. In fact, this gap remained intact between 1500 and 1800 and only began to increase after the creation of the republics, going from 0.86 times the GDP per inhabitant in 1820 to 2.09 in 1973 (Ocampo & Bertola 2010).

In short, the region has shown an economic lag from 1800 to the latter part of the 20th century, as all of the countries of Latin America grew on average at a slower rate than the United States during this period (Coatsworth 2008). In fact, the differences were not only between the U.S. and Latin America; the economic scenario between the countries of the central and southern part of the continent also varied. In the early 20th century, the income per capita in Argentina was 4 times higher than that of Brazil, 2.8 than that of Colombia, 2.4 than that of Mexico and 3.4 than that of Peru (Coatsworth, J. 2008).

Likewise, the variance of integration to the global markets after 1870 by Latin American countries was very high. While in Argentina per capita exports were 67 dollars in 1913[2], in Chile 75 and in Uruguay 59, the trade integration of Colombia and Brazil was precarious and their exports per capita were 6 and 13 dollars, respectively.[3].

Considering all this, What caused the economic divergence starting in the 19th century in Latin America? There are diverse theories in the economic literature that try to explain the determining factors for the economic divergence of the American continent. However, despite the various versions, there has never been an empirical analysis based on the post-independence institutional quality of Latin American countries for this period that allows the understanding of the economic lag of the region. Thus, the main reason for carrying out this work is to establish a quantitative relationship between the post-colonial institutions and current economic performance. More importance is given to the institutions that were

---

[2] Measured in US$ from 1913
[3] Bulmer-Thomas, 2003

formed after the independence of the Latin America nations, diminishing the role, a leading role until now, of the colonial age.

This work seeks to show the importance of the colonial period and its effects on the long-term development of the region in a less deterministic manner than that which is defended by neo-institutional views, which attribute 200 years of economic lag solely to the colonial institutions. Thus, a different approach shall be upheld, which gives importance to and considers other relevant transformations, such as the independence and the opportunities derived from the opening of trade.

In this way, it will be shown, firstly, that the economic stagnation of Latin American countries and the intra-regional differences are closely related to the institutions that arose after the independence of Latin America. Secondly, it will be tested that these barriers did not originate from the economic and social weaknesses and inequality from the colonial period, but from the institutional reforms that took place after independence, so the colony *per se* did not have a direct impact on the long-term economic development, but the legacy that the Iberian practices and policies left on the rising American institutions did.

The determining factors and the consequences of institutional trajectories in the 19th century will be studied for the following countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Peru, El Salvador, Uruguay and Venezuela. The analysis shall be focused on the depth and the quality of the reform carried out after independence, considering the evolution of property rights, transaction costs, civil codes, judicial systems, fiscal structure, political transparency and participation, democracy, representativeness, State capacity, among others. All of this, in order to understand the effects that colonial legacy had on the institutional evolution of Latin America in the 19th century, and the repercussions of the distinct institutional paths on long-term economic performance in each country.

In sum, this document intends to prove that different post-independence institutions were formed based on colonial legacy, and that these Latin American institutional trajectories in the 19th century are in part the origin of the current economic divergence. This hypothesis shall be proven with the construction of an index that reflects the institutional trajectories of each Latin American country in the 19th century. This index shall be related with the long-term GDP per capita of each nation in order to evaluate the

implications of the reforms carried out after independence on the entry institutional paths.

This document is organized in the following manner: section II presents the literature review. Section III presents the data, section IV describes the construction of the post-independence institutional trajectories index. Section V presents the empirical strategy, section VI describes the results, section VII analyzes the relevance of colonial institutions in the post-independence era and section VIII concludes. The appendices will show the construction of the index in detail.

II. Literature review

The academic debate on the determining factors for growth is extensive, but recently the literature has focused on the effects that institutions have on economic performance. The consensus shows that, despite the notable exceptions of the Latin American region[4], that the political institutions that were representative and had higher constraints on the executive, are positively related with a positive relationship with economic growth (Knack & Keefer 1995, Mauro 1995, Easterly & Levine 2003, Dollar & Kraay 2003, Glaeser et al 2004; and Rodrik et al. 2004). As political power is more decentralized and decisions are determined by diverse groups of society, they seek maximization of benefits of the community, no of an exclusive elite, and therefore more public goods will be provided.

In the context of the discovery of the New World and the economic, political and social differences that arise between the northern and southern regions of the continent, the neo-institutionalist approach emphasizes that falling behind of Latin America can be explained by the institutions that arose in the colonial period. Within this trend, various determining factors can be seen in said institutions that foster or suppress development. Various authors attribute the economic differences to geographical matters, to political, economic and cultural traits of the conquerors, commercial ties, among others. Neo-institutionalism holds that an exclusive elite and unequal and highly stratified societies have been maintained over time and this has allowed for these institutions to persist and

---

[4] The region also had anti-democratic and authoritarian episodes that led to sustained and elevated growth. Argentina (1930-1932; 1943-1946; 1955-1958; 1962-1963; 1966-1973; 1976-1983), Brazil (1889-1894; 1930-1945; 1964-1985), Bolivia (1930-1952; 1971-1982), Chile (1927-1931; 1973-1990),Colombia (1953-1958), Costa Rica (1917-1919), Cuba (1952-1959), Guatemala (1931-1944; 1954-1986), Honduras (1963-1971; 1972-1982; 2009-2010), Mexico (1853-1855; 1884-1911),Nicaragua (1934-1979, Panama (1968-1989), Paraguay (1940-1948; 1949-1989), Peru (1948-1956; 1968-1980), Uruguay (1933-1938; 1973-1985) and Venezuela (1908-1935; 1952-1958).

negatively affect long-term economic performance.

Summerhill & Weingast (2000), Landes (1999) and North (2005) establish that the institutions of the new continent are a consequence of a cultural and political transfer of colonists and, in the specific case of Latin America, these transfers were harmful: fiscal centralism, trade monopolies, religious doctrines, poorly restricted executive, etc. There are also authors that state that the differences between North America and Latin America arose from the different doctrines of the colonizers, English political and economic liberalism versus Portuguese and Spanish mercantilism. Bruhn and Gallego (2010) argue that the differences in economic performance in Latin America can be explained by colonial activities. In particular, they show that the areas with a high native labor supply manual and adequate areas for mining exploitation and plantation have lower levels of current economic development. The areas that had bad colonial activities; areas with a high indigenous population density and with economies of scale, have a 13.4 percent lower GDP per capita than the areas that had beneficial colonial activities.

The way in which the land was distributed and the way agricultural reforms took place also affected growth. The "Fronteir Thesis" shows that the presence of a broad frontier in the north generated an individualist environment, which fostered economic equality and ascending mobility and that this created a stable democracy, which led to an unparalleled economic prosperity. However, García-Jimeno & Robinson state that in fact the expansion of the frontier improved the economic conditions, but it is conditional to good political institutions. In the countries with exclusive elite and powerful oligarchies, the expansion of the frontier was an instrument in order to remain in power.

In this direction, the expansion of the frontier in Latin America did not generate economic equality and democracy because the political institutions did not allow it. Land ownership and its distribution in Latin America was characterized by its concentration and exclusive nature. The literature shows that in places where there was a relatively homogenous population (settlement colonies), society was more democratic, as is the case of Argentina, Chile, Uruguay, southern Brazil, Costa Rica, and Santander and Antioquia in Colombia (Kalmanovitz, Nugent & Robinson 2005). These regions reached higher income levels than the areas that had heterogeneous and stratified populations. For example, the political fragmentation of Costa Rica's elite contributed to the investment in public goods,

as it generated greater competition due to popular support.

Despite the breadth of the debate, three main approaches can be pointed out that seek to link economic performance in different Latin American countries with institutions. The first trend proposes that economic development is determined by institutions and that they vary according to the type of settlement that took place in each region (Acemoglu et al 2001). Hence, the extractive institutions that arose in areas with high settler mortality rates were detrimental to economic growth, as they facilitated the creation of unequal societies, with powerful elites that established exclusive policies.

Besides, Acemoglu et al (2002) argues that there was a "reversal of fortune" between the zones that were wealthier in 1500 and those which were poorer. The source of the "*reversal of fortune*", was the institutions that were formed in each region. Wherever extractive institutions were formed, settlement was difficult given the high rate of mortality caused by "tropical" diseases, the high native population density favored the exploitation of resources and the level of civilization of these societies allowed the settlers to take over their tax systems. These settlers did not have incentives to design institutions that guarantee development and equality; and were only interested in taking over the resources and taking them to their country of origin. The divergence was evident at the end of the 18th century when the industrial revolution exploded, as the good institutions that respected property rights fostered the adoption of new technologies that increased productivity, while the extractive institutions hindered such technologies, given that they had no incentives to abandon their profitable extraction systems. Despite the popularity of this hypothesis, there are accounts that contradict it, arguing that there was no such reversal, that India had higher wages than those of Western Europe in the 16th and 17th centuries (Bandyopadhyay & Green 2010, Allen 2005).

The second approach is the geographical one, which associates growth with the tropical latitudes and geographical conditions (Sachs & Warner 1997, Bloom & Sachs 1998 and Sachs 2001). The adoption of technologies in the tropic is more difficult, as its spread slowly, complicated and more expensive, given the topological conditions. Thus, the areas closest to the equator were less developed because the dissemination and adoption of technology is arduous in these areas.

The differences between Latin America and the U.S. and Canada depended on the

initial allocations and the institutions that were created from these conditions (Engerman & Sokoloff). In Latin America and in the southern U.S., the conditions were similar; large parcels that facilitated economies of scale and extensive estates, enormous availability of mining resources and a significant indigenous population[5]. Based on this context, extractive economies and extensive production plantation were developed. In the Spanish colonies, given the extensive availability of labor supply and the gold and silver mines, a mining extraction monopoly was consolidated, which exploited the indigenous population and exported those resources to the old continent. In the large-scale production colonies[6], where there were mostly extensive sugar and cotton plantations, slave labor was imported from Africa. So, due to the mass import of slaves, indigenous submission and the concentration of Spanish power, a heterogeneous and unequal society was generated, characterized by an extremely powerful elite and a poor majority with low human capital.

Because of the social context in the colonies, different institutions arose, in accordance with the productive system. In the north, the institutions were democratic and representative and fostered the protection of property rights. Opposite to this, the other type of institutions that arose defended the interests of an exclusive elite, legitimizing their actions for their own benefit, marginalizing common welfare and concentrating wealth and political power.

Lastly, the approach that will be defended and tested empirically explains the different entry paths in Latin America, according to the institutional changes that took place after independence (Coatsworth 1998, 2008). Latin America's economic lag was not a matter of settler's origins, but instead it is related with the commercial structure between the colonies and the Iberian Peninsula and the Iberian institutions of the time. The Spanish and Portuguese crowns failed to modernize trade regulations, miscarried the improvement of property rights and did not develop inclusive and representative policies (North et al. 2009). They understood that they had to maintain said extraction and weakening policies in their colonies in order to continue gaining benefit from said territories.

The countries which experienced a transformation in favor of global market integration, low transaction cost, greater protection of property rights, low risk of expropriation and incentives for innovation were achieved. Thus, the trade activity of Spain

---

[5] 15-25 million indigenous people. Lockhart, J., and Schwart, S. (2005)
[6] Brazil and Central America.

and Portugal with their colonies did not experienced the transformation that Holland and England did, where trade union privileges were suppressed, public education was provided, civil codes, low transaction cost and protection of property rights were gathered (Weingast 1997). This way, the colonial heritage determined the pace and quality[7] of the reforms that were carried out by the rising republics. The way in which the relationship between colonial legacy and post-independence institutional trajectories took place in Latin America could have hindered technological innovation and progress; it is argued that the countries that did not carry out transformations oriented toward improving property rights, reducing the discretionality, the risk and the costs of transactions, lagged (Stein & Stein 1970).

Latin America lagged during the last two centuries because the economic institutions that were created from the colonial legacy distorted the incentives and wasted the potential of the natural resources available in the region (Coatsworth 2008). Central America and South America had productivity levels that were inferior to that of the north, due to the differences in factors of production, the difficulties in joining foreign trade, the tax structure and the regulatory policies. Coatsworth 2008 contradicts the view that the creole elite was powerful and argues that it was the metropolis that were responsible for maintaining these select elite in order to benefit from their colonies. These elite had so little power that they could not even guarantee their own property rights or accrue capital. The efforts of the Iberian metropolises to quell rebellions, defend and maintain their land and fiscal spoils impeded them from investing in infrastructure, human capital and public goods. Since Spain and Portugal did not play an active role in the industrial revolution, this inhibited their colonies from forming part of this process. The new republics were only able to become staple exporters and did not develop an industry sector given the fragile and harmful legacy left by the Iberians (Coatsworth 2008).

Since the Iberian colonial regimes imposed institutional constraints on the creation of productive enterprises and on European migration, economic incentives were distorted, increasing private costs and risks. The political risk associated with unpredictable policies, the inefficient costs of property rights, the high tax burdens and the low supply of public goods, in particular the investment in human capital and infrastructure, were harmful to the economic trajectories of the region. Therefore, it can be affirmed that the reforms that took

---

[7] Defined property rights, low risk of expropriation, reduction of transaction costs, no trade union privilege, among others.

place when settlers were expelled set the standards and the structure of the governments, the States and its policies, and they would have severe consequence in the subsequent economic performance.

The independence in Latin America created opportunities for political and institutional modernization, however these opportunities were not fully exploited (Coatsworth 1998). Despite some liberalization and a greater integration with world markets was experienced, violence and internal civil confrontations overshadowed the positive effects of independence. The 19th century globalization elevated the levels of income per capita in the countries where there were strong institutions, and where the institutions were weak, the benefits of globalization were not maximized. Thus, the weight of colonial institutions after independence was greater in the regions where the pressure towards modernization was hindered by the interests of the elite in power.

INDEPENDENCE, COLONIAL LEGACY, TRADE AND ECONOMIC PERFORMANCE

In general, Latin America was not an underdeveloped region before 1800 (in terms of GDP per capita). In fact, the colonies showed levels of production that were superior to the world average during the colonial era. Even during the colony, the most productive economies in Latin America were the plantation islands in the Caribbean, where sugar exports comprised a significant part of the economy[8] and the GDP per capita was similar to or surpassed European levels (Coatsworth 2008). In fact, the estimates of the GDP per capita for Argentina, Barbados, Cuba and Mexico in the 18th century show that all of them, except for Mexico, had economies that were more productive than North America (Coatsworth 2008). Despite this, the increase in productivity in the first century of Spanish domain had a decreasing trend throughout the continent in the long term.

As a consequence of the growing illegal trade between the colonies and the world market, the Bourbon and Pombaline reforms were created, which tried to drive trade with the colonies once again. This reforms improved the administrative system, diversified colonial exports and energized trade between the colonies and the metropolises. Following this, the productive activity of the colonies intensified and the extractive capacity of the crowns was enhanced.

---

[8] Upwards of 30% and 40% of the GDP

After the colonial decline, all of the main colonies (except Argentina) felt behind, showing that the Iberian colonialism failed to create dynamic societies that could independently generate technological and organizational innovation. The Spanish mercantilist model failed to provide the economic opportunities that the liberal British model offered. In this sense, Latin American economies lagged because of the existence of economic institutions that hindered development, designed mainly to extract revenue and retain power. This lag was not due to the character of the colonizer, but instead due to their commercial policies and practices and their influence in the respective colonies. In the early 19th century, the Latin American region inherited the weaknesses of the Iberian States and faced the high costs of gaining independence from the metropolis (Bulmer-Thomas, 1994). These costs influenced the quality and speed of the reforms of the new nations and determined long-term economic performance.

Independence extended throughout the region in the early 19th century. This process was the result of the social non-conformity of the American people with the political regime and the weakening of Spain as a consequence of the Napoleonic invasion. In 1808 Spain was invaded by France, the American colonies did not accept Joseph I as ruler and radicalization began against the Crown. The process of independence was overshadowed by the reconquest, but finally in 1824 most countries were already autonomous.

Notwithstanding the liberalization of the regimes and the colonial burdens, the bolstering of the colonial economy was delayed and structurally it preserved past extractive characteristics. Latin America felt behind, as trade levels did not vary much between 1810 and 1850 (Halperin, 2008); the growth of exports between 1800 and 1870 was 1.3% per year (Ocampo and Bertola 2011). Despite there being several accounts that show that the performance of the region after independence was not disappointing, and that in fact it gained net benefits (Prados de la Escosura (2009) and Llopis & Marichal (2009)), most countries in 1830 showed lower levels of growth than in 1800 (Ocampo and Bertola 2011). For this reason, it is of great interest to explain why such a subsequent economic lag took place after the independence process and recognize its institutional causes.

In Latin America after 1860 a generalized liberal agenda was consolidated, which eliminated ethnic discrimination, abolished slavery, separated church from State, terminated the archaic systems of land ownership, eliminated internal and direct taxes and did away with state monopolies. The institutional modernization of Latin America constituted a

destructive phase that overthrew colonial institutions. The reforms that followed introduced new constitutions and legal codes, especially civil and commercial code, followed by insurance systems, laws on mining and fiscal, tax, tariff and public debt reform. Thus, a new policy arose as well as a new economy, framed by new civil, legal and commercial codes, which would renew the institutional scenario and mold the development of the territory.

Despite this, the Latin American independence was followed by great political instability, conflicts, violence and economic stagnation that lasted over half a century. Latin America was a violent territory between 1820 and 1870; the average deaths per 1000 inhabitants was 4 times higher than in western Europe (Bates et al. 2006). Political instability, civil wars, uncertainty on property rights and violence made the capital become liquid instead of being invested in fixed capital or land, deteriorating economic growth and reducing the capacity of the State (Bates et al. 2006). As a consequence, one can speak of a period of lost opportunities, in which circumstantial economic situations were wasted.

Regarding this destructive phase, in Argentina, Chile, Uruguay and Costa Rica, the struggle between centralists and federalists after independence generated a rapid disintegration of the institutional legacy of the colony. While in other countries the creole elite resisted change and sought to restore the capacity of the conservative State and quell liberal protests. Eventually, liberal reforms were imposed, which led to the collapse of the already weakened States inherited from the colonial regime. Thus, the depth and speed with which the Latin American States coped with the institutional modernization process after independence was key in explaining the subsequent economic paths. It is believed then, that the pace of institutional modernization in the 19th century is a predictor of the long-term economic performance, as greater institutional frame allowed a greater use of the benefits from the globalization of 1880-1929 and the start of the 20th century (Coatsworth 2005).

In the 19th century, starting in the decade of the 30's, several Latin American countries established political institutions in which the president of the moment would choose and, within his limits, ensure the election of his successor in voting booths. These systems that favored the elite and oligarchy were stable for long periods in some Latin American countries. In fact, the so-called *"proelite"* system existed in Mexico until the year 2000. Towards the end of the 19th century the economic growth driven by exports began.

11

The third period of globalization[9] was portrayed by the increase in Latin American exports given the increase in the demand for commodities by industrialized nations. This globalization transformed the structure of the economies in the region, "for the first time, Latin American economies grew more rapidly than the population" (Coatsworth 2005), foreign investment grew abruptly, the levels of income per inhabitant, wages, productivity and the standard of living increased, as well as education and the health provision. However, these growth rates did not persist and were overshadowed in 1929 by the great depression. It is believed that this growth driven by exports was better exploited by those countries that had better institutional foundations, that is, better reforms, constitutions and trade codes.

During the 20th century there was an abuse of power carried out by Latin American leaders, who cautiously eliminated the opposition without resorting to the voting booth. Lastly, military dictatorships led to the closing of the legislative branch and the elimination of electoral systems. In 1930, there was military influence and coup d'états in no less than six different countries: Argentina, Bolivia, Brazil, Dominican Republic, Guatemala and Peru (Rouquie 1994). These military regimes generated significant changes in the political agenda of Latin American countries[10]. Despite reducing representativeness and freedom of expression, they led to sustained economic growth. The institutional trajectories of Latin America have diverged and cannot be framed into a simple generalization. The restrictions to the executive have reached minimum levels in different periods and in diverse circumstances, the coup d'états also cannot be generalized, for example as of 2000 Venezuela had experienced three, while Bolivia had twenty-nine; however after 1980, it can be said that there was a democratization wave throughout the region.

In the period between wars, liberal policies became unpopular, world trade lost its dynamic nature and the State began to grow and intervene further in the economy and in the social arena. Development was reduced to domestic spheres; Latin American countries drove the creation of national industries through the substitution of imports. In the decades of 1950 and 1970, this industrialization led to high growth, the highest in all of history: 5.5% annual and 2.7% per inhabitant (Ocampo & Bertola 2011), the population grew and

---

[9] The first cycle began with Columbus and lasted for one century. The second began in the late 17th century and ended with the Hatian Revolution (1791-1803) and its subsequent seismic waves. The third began towards the end of the 19th century and ended with the Great Depression. The most recent cycle has just begun. (Coatsworth 2005)

[10] Ecuador and El Salvador in 1931 and Chile in 1932.

the economies became predominantly urban. However, in 1980, the foreign debt crisis ended with the previous years growth; this decade was called the "lost decade" given that in economic terms, there was deterioration in the region. Subsequently, significant but very volatile growth rates were achieved, on the one hand driven by reform destined to liberalize the market further and increase trade integration, and on the other, interrupted by international circumstances.

III. DATA

The data with which the index of institutional reform in favor of economic growth in the 19th century for each country was built is from the database called *Polity IV*, from the University of Colorado in Boulder and the University of Maryland, which contains institutional information for all of the countries of the world from 1800 to 1994. Two indicators for political regimes are found in the database: Autocracy and Democracy; and eight institutional an political indicators: Regulation of Chief Executive Recruitment (institutional processes related to the transfer of executive power), Competitiveness of Executive Recruitment (how the executive is elected competitively), Openness of Executive Recruitment (how the popular sectors can access political power), Constraints on Chief Executive (de facto power of the executive), Regulation of Political Participation (development of institutional structures to support political expression), Competitiveness in Political Participation (the way in which the non-elite have access to institutional structures for political expression) and Centralization of the State Authority (geographical concentration of political decision making). They are all discrete and ordinal variables.[11]

In addition, a "speed" component was created with historical dates to measure the pace with which the reforms and institutional changes were done. This component contains the dates in which each country established its first constitution, the first civil code, the first trade code and when the abolition of slavery was decreed.

In order to carry out the empirical estimation, income per capita and the population of each country from 1800 to 2008 is taken into account, obtained from the *Historical Statistics* by Angus Maddison; as well as the exchange terms, exports and imports of each country since 1928 to 2008, obtained from the statistical books from CEPAL.

---

[11] See annex 1.

The data that was used to estimate the relationships between the colonial era and the institutional index and the income for each country comes from the database of the article "Good, Bad and Ugly Colonial Activities: Do They Matter for Economic Development?" by Bruhn & Gallego (2007), from which the following variables were obtained for the colonial period (XVI-XVIII): bad colonial activity, pre-colonial population density, mining activity, plantations, pre-colonial health index, average annual temperature, average annual rainfall and altitude of the capital city. Since this data is on the province level, the mean per country was obtained for these variables. In particular, the bad colonial activity variable is the ratio of provinces with harmful colonial activities in each country.

IV. Institutional Index pro Growth in the 19th century

This index intends to capture the changes in the institutional trajectories of the 19th century in each country in favor of investment, trade, property rights, transparency, competition and political participation, representativeness, democracy, institutional independence and state capacity. The evolution towards more representative and democratic political systems, in which executive power is restricted, demonstrates positive changes in favor of investment, innovation, trade regulation, public goods supply and the reduction of expropriation risk (Sokoloff and Zolt 2007 and Weingast 1997). In the political field, the generation of efficient institutions, that guarantee property rights and facilitate transactions, led to more efficient economic organizations that catalyzed economic activity, better distributed resources and had better legal and judicial representation systems.

Electoral transparency, popular access to the executive and the competitiveness in political participation reflect the quality of the executive. If the elections are not regulated and access to power is limited, the group in power has high incentives to conserve it, to change the rules of the game and exercise extractive policies that maximize their own interests (Acemoglu 2006). Hence, the ruling class will prefer to implement inefficient policies that deliver benefits from the rest of society, as well as inefficient economic institutions that are coherent with their policies. On the other hand, as access to executive power is more open and transparent, the underlying policies will not have an extractive character but instead will encourage the production of technology and will invest more in public goods. When the State provides said conditions, it guarantees security, low

transaction costs, establishes exemplary legal systems, provides well-defined property rights and offers high supply of public goods (Van Bavel & Van Zanden 2004). Relevance to growth patterns has also been adjudicated to the legal structure. Legal systems that rigorously enforce contracts and property rights and reduce the likelihood of default and expropriation favor economic growth; (LaPorta et al. 1997; LaPorta et al 1998; Levine 1999; Levine 2005; Levine, Loayza, and Beck, 2000).

Civil rights also provide a significant notion of institutional progress. As a country grants and guarantees more civil rights to its population, the nation advanced towards an institutional scenario with improved quality. Because of this, the abolition of slavery, universal suffrage and the creation of civil codes reflect significant institutional changes for the period, as there has been documentation on the negative effects of slavery (Sokoloff & Engerman 2000 and Nunn 2008) and the delay in implementing voting and universal education (Mariscal and Sokoloff) on long-term economic growth.

STATISTICAL TECHNIQUE FOR BUILDING THE ACP INDEX

For the creation of the index, the *Principal Component Analysis* (PCA) methodology was used. This statistical method allows to group a set of variables in a lineal combination of the original database. This lineal combination, called *principal component,* explains the maximum variability of the original data. This technique is used to reduce the dimensionality of the original set of data. Intuitively, the PCA recognizes the causes of variability of a set of data and orders them by relevance. In this way, for the building of the index the first component will be taken.

The use of this technique is useful if the variables are highly correlated. This is the case with the chosen variables, as they are all related to institutional and political characteristics; and they are measured in the same manner. The high correlation between the variables allows the reduction of such variables, as it is an indication that there is redundant information and therefore a number of factors lower than the number of variables can explain most of the variability of the original data. For this reason, the use of this technique is considered convenient for the creation of the index.

Depth of the Reform Carried Out

In order to characterize the depth of the institutional changes that took place in the early 19th century, the following variables were used: executive constraints, democracy, regulation of the transfer of power, electoral transparency, popular accessibility to the executive, institutional independence, political expression and competitiveness of political participation. With these variables, an index was created for each country for a time range between 1850 and 1899, using the PCA method.

TABLE 1. DESCRIPTIVE STATISTICS INDEX.

Variable		Observations	Mean	Standard Deviation	Minimum	Maximum
Democracy		715	2.185	2.431	0	10
Transfer of Power Regulation	erencia Poder	715	1.895	0.725	1	3
Electoral Transparency	ctoral	715	1.124	0.997	0	3
Popular Access to Executive	Ejecutivo	715	2.673	1.841	0	4
Institutional Independence	titucional	715	1.026	0.008	1	2
Executive Restrictions	utivo	715	2.766	1.835	1	7
Political Expression		715	3.008	0.608	1	5
Political Participation Competitiveness	rticipación Política	715	2.794	0.905	0	5

All of the variables are discrete and are ordered in such a way so that an increase informs of an improvement in each variable[12]. This is why an initial estimate is done with the mean of each variable for the period between 1850 and 1899, thus capturing the institutional scenario of each country during this period. A higher average of each variable will show better institutional quality. Likewise, a higher index (derived from the main component) will show the same. The results of the construction of the index are presented in annex 2. It can be seen that the country with the best institutional performance is the U.S., a result that is coherent the historical evidence. Following the U.S. is Costa Rica, Colombia, Chile, Honduras and Argentina[13].

---

[12] See annex 1.

[13] See annex 2.

Likewise, the same index was calculated with the PCA method but with the standard deviation of each variable. A higher classification in this index indicates greater volatility in politics and institutions, which will negatively affect the final index level. In this case, the index is read in the opposite way, a higher score indicates greater institutional instability. Thus, the countries that suffered from higher volatility according the analyzed variables for the period of interest are Bolivia, Colombia, Guatemala and Peru. On the other hand, the countries with greater political stability were Uruguay, El Salvador, Nicaragua, Dominican Republic, Ecuador and the U.S.[14].

PACE OF THE REFORM

Given that a fundamental component for understanding the institutional trajectories of the 19th century is the speed with which the reforms described in the previous section took place, a "weight" for this pace was created. For this, the dates in which each country executed institutional reforms of vital importance were taken into account, such as: the first constitution, the first civil code, the first trade code and the abolition of slavery.

$$Weighted\ Speed_j = \frac{\sum_{i=1}^{4}\left[\dfrac{LastYear_i - Year_{i,j}}{Range_i}\right]}{4}$$

The weighted speed of the country j is equal to the average of the scores that the country j obtained for each reform carried out. The score of the country j in reform i is equal to the subtraction between the year in which the last country carried out the reform i and the year in which the country j made the reform i, divided by the range of time between the latest i reform and the earliest one. The country that led the reforms was the U.S.. Brazil and Paraguay were the countries that applied such reforms the latest[15]. This weight is multiplied

---

[14] See annex 2
[15] See annex 2.

by the index that was obtained with the Principal Component Analysis, so that the index also reflects the speed with which the countries marked their institutional trajectory.

Institutional instability, its quality and the speed with which the reforms were carried out are important for the building of the index. Following this, the index was built in the following manner:

$$Ind_{j,1850-99} = Weighted\ Speed \times \left[-\left(\frac{1}{2}\right) \div \times IndSd_{j,1850-99} + \left(\frac{1}{2}\right) \div \times Ind\ Mean_{j,1850-99} \right]$$

Below, the relationship between the speed component and the index built with the indices of the mean and the standard deviation of the variables. The relationship between the quality of the institutional reforms carried out after independence and the speed with which they were executed are positively related[16].


---
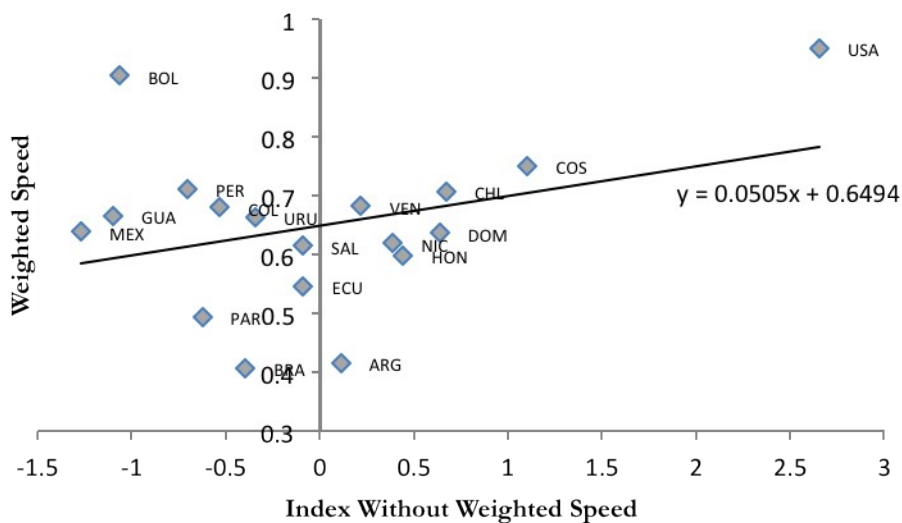
[16] As a country executed its reforms faster, these reforms were deeper and had better institutional quality.

The index shows that the United States was the country that had the best institutional trajectories; it carried out reforms of great depth and quality initially, and enjoyed stable, representative, inclusive and transparent political institutions. As far as Latin American countries, it can be seen that Costa Rica, Chile and Dominican Republic experienced institutional trajectories with better quality and experienced great political stability. In contrast, Mexico, Brazil, Guatemala, Bolivia, Argentina and Paraguay suffered from volatile political scenarios and carried out lower quality reforms in a tardy manner.

The results are consistent in the sense that the country with the best institutional index is the U.S., followed by Costa Rica and Chile. These countries had superior institutions and carried out higher quality reforms. In fact, these countries are more economically equal, had representative and inclusive political systems and had a higher supply of public goods (Azcuy & Biroco 2001, Matson 96, Salvatore, R and Newland 2003). The lowest institutional indices belong to Mexico, Brazil, Guatemala, Bolivia and Peru, as these countries are characterized by having unequal societies, extractive economies and a highly exclusive political system (Bruhn and Gallego 2007).

GRAPH 1. INSTITUTIONAL INDEX SUPPORTING GROWTH IN THE 19TH CENTURY
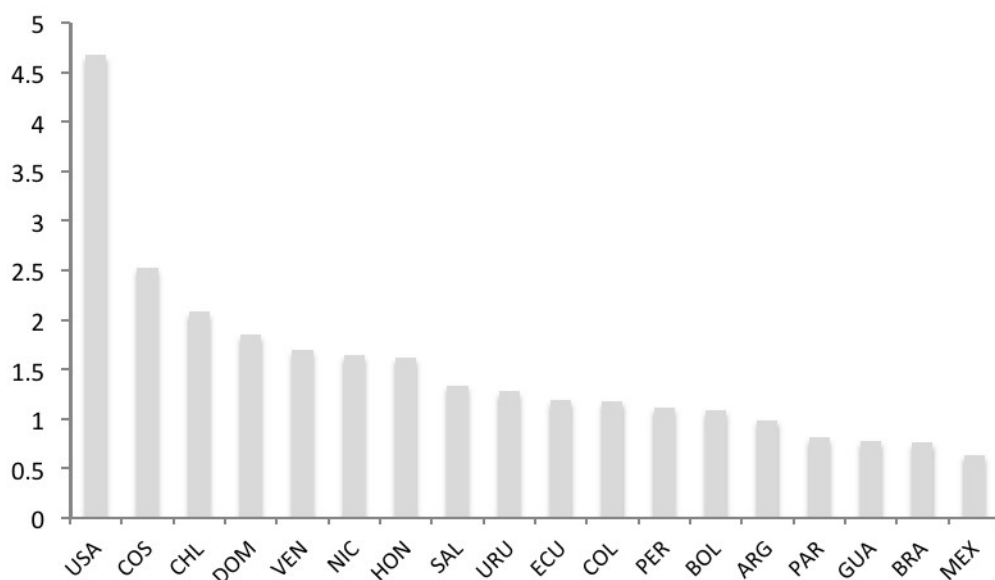
Source: Calculations of the author.

V. EMPIRICAL STRATEGY

In order to show that the republican institutions had an influence on the entry paths of Latin American countries, in particular due to the reforms that were carried out in the 19th century in the new nations, the following regression shall be estimated:

$$LogPib\,pc_{j,t} = d_t + \delta_j + \alpha_{Pt} Log\,PExp_{j,t} + \beta_t Log\,PExp_{j,t} \cdot Ind_{j,1850-99} + \sum_{t \geq 1928} \eta_t \cdot Ind_{1850-99} \cdot d_t + \phi X_{j,t} + e_{j,t} \quad (1)$$

where $Ind_{j,1850-99}$ is the institutional index in favor of economic growth, described in the previous section, that captures the speed and depth of the reforms carried out in each country j in favor of investment, trade, property rights, independence of the branches of power, political transparency, representativeness, etc. $Pib\,pc_{j,t}$ is the per capita gross domestic product of the country j in the year t, d_t are fixed year effects, δ_j fixed country effects, $Log\,PExp_{j,t}$ is the Purchasing Power of Exports[17] per capita, measured in thousands of dollars from 2000, $X_{j,t}$ is the size of the population of the country j in the year t, that is included as a control, and $e_{j,t}$ is the term of error.

This estimation intends to reflect the importance of post-independence institutions in the maximization of the economic opportunities that arose when the new republics were created. If the nations had better institutions as a result of early and better quality reform, the countries had a better likelihood of maximizing economic opportunities. In this case, the relationship between institutional quality and trade benefits maximization will be tested.

The variable $Log\,PExp_{j,t}$ is the multiplication of the terms of exchange by the quantum of exports. This concept intends to measure the gain or loss that the variations of the relative prices of foreign transactions represent for an economy; it is a measure of the variations in purchasing power of a country expressed in real terms. Therefore, it shows the variations in

---

[17] (Px/Pm)X

the volume or quantity of goods that a country can purchase with its income derived from

its foreign trade.

The parameter that goes along with the variable $Log\,PExp_{j,t} \cdot Ind_{j,1850\text{-}99}$ is that of

interest. A significant coefficient β_t implies that the divergent entry paths that Latin

American countries experienced depended on the advantages (or disadvantages) that

institutional reform provided in order to take advantage of economic opportunities, in

particular those related with trade. That is, that the divergence between income per capita

can be explained in part by the depth and speed with which post-independence reforms

were carried out. The term $Ind_{j,1850\text{-}99} \; d_t$ identifies differences in economic performance

given the various institutional reforms applied in the young republics. With the parameter

ηt being significant, it identifies the heterogeneous effects of the impact on the GDP per

capita of the reforms carried out after independence.

This estimate can generate problems with endogeneity due to reversed causality, as

the depth and speed of the reforms carried out in favor of trade, investment and

improvement of property rights could be determined by each nation's income. However,

given that the index is comprised of variables from the 19th century, there is no such

simultaneity. There could also be problems with endogeneity by omitted variable, as the

gross domestic product of a nation is determined by countless factors, in addition to the

benefits derived from trade and institutional determining factors. Notwithstanding, the

index of institutional change in the 19th century captures determinant variables for the

GDP of a political, social and legal nature. In order to account for the institutional scenario

in political terms, the index contains the instability of the political structure, constraints on

the executive, democracy, transparency of the electoral system, accessibility to executive power by the majorities, institutional independence (de jure power), level of political expression, collectivity in political participation, among others.

Also, the estimation is being controlled by fixed effects for each country, that capture all of the invariant characteristics of each country over time, such as geographical traits, legal systems or religious affiliations; and by yearly fixed effects, that control through the economic, social, political and international circumstances that were had over time. A bias might arise by omitted variable in the absence of a control that varies between countries and time and that is also correlated with the institutional index and with the GDP per capita. That is why there is also a population control, which is a variable that varies between countries and over time. Therefore, the possible sources of bias by omitted variable are reduced and that is why it is considered that the estimators are consistent.

TABLE 2. DESCRIPTIVE STATISTICS

Variable	Observations	Media	Standard Deviation	Minimum	Maximum
GDP per capita	1316	3649.901	2300.990	823.000	13185
Exports	1348	6264653	23300000	3500	290000000
Imports	1349	6075317	22900000	5000	310000000
Terms of Exchange	1317	99.223	35.133	18.779	269.140
Benefits of Exchange per capita	1287	7.617	155.353	-347.286	2807.966
Volume Traded per capita	1346	458.924	786.764	7.009	7657.712
Export Purchase Power per capita	1286	238.408	497.919	0.684	6856.052
Institutional Index	1394	1.329	0.498	0.639	2.527
Benefit Index Interaction	1287	12.054	299.611	-682.041	5839.757
Volume Log Index Interaction	1346	5.112	1.470	1.947	8.943
Purchase Power Log Index Interaction	1286	4.398	1.533	-0.380	8.833
Population	1394	16368.590	29270.340	480	198739
Year	1394	1968.5	23.7	1928	2009

Lastly, in order to establish the relationship between the colonial era and the institutions of the 19th century, the effects that harmful colonial activities have on the institutional index shall be examined. These activities were classified by the authors Bruhn & Gallego (2007) so that the zones with economies of scale were considered as harmful activities, independently of the pre-colonial population, given that in places with high population density, the activities that surged exploited said manual labor, and where no labor supply was available, it was imported from Africa. In either of the two circumstances, extractive

production structures were created which fostered the creation of unequal societies. For this, the following relationship will be examined:

$$Ind_{j,1850-99} = \alpha\, HarmfulCA_j + \beta\, LogPob\Pr e_j + \gamma\, Min_j + \rho\, Plant_j + \phi\, LogS_j + \delta\, X_j + e_j \quad (2)$$

Where *Ind$_j$,1850-99* is the index that was built for the institutional trajectories in the 19th century for the country *j, HarmfulCA$_j$* is a variable that shows the ratio of states or provinces of the country *j* that had a presence of harmful colonial activities, understood as economies of scale, high indigenous population and mass import of African slaves, *DPobPre$_j$* is the logarithm of the pre-colonial population density of the country *j, Min$_j$* is the presence of mining activities in the country *j, Plant$_j$* indicates the existence of extensive plantations in

the country *j* and $\varphi LogS_j$ is the logarithm of a pre-colonial health index[18] in the country *j*. X_j

is a control vector that includes the average temperature, annual rainfall and altitude of the capital city of the country *j*.

Once the relationship between the created index and the colonial era has been established, a comparison will be done of the effect that institutional trajectories and colonial institutions have on economic performance, introducing the term into equation 1. In order to demonstrate that the colony affected the entry paths of Latin American countries due to the legacy that it left in institutional terms, in particular due to the reform that took place in the 19th century in the new republics, the following regression will be estimated:

$$LogPib\ pc_{j,t} = d_t + \delta_j + \alpha_t Log\,PExp_{j,t} + \beta_t Log\,PExp_{j,t} \times Ind_{j,1850-99} + \omega_t Log\,PExp_{j,t} \times HarmfulCA_{j,XVII-XVIII} +$$
$$\sum_{t \geq 1928} \eta_t \times Ind_{1850-99} \times d_t + \phi\,X_{j,t} + e_{j,t} \qquad (3)$$

Again, a significant coefficient ω_t suggests that the colony had an impact on the entry paths

of the region and affected the way in which trade opportunities were maximized and it effects in the economic performance of each country.

VI. RESULTS

Table 3 contains the results of the estimation of the empirical strategy described by equation 1. The fixed effects and the control were added progressively in order to capture the sensibility of the variable of interest to the various specifications. Thus, the first column in the table represents a simple regression that has *pib pc* as a dependent variable and the index, the purchasing power of exports and the interaction between these two independent variables. The second column is this same specification with fixed country effects, the third

---

[18] This health index measures the quality of life adjusted by years, based on the health standards of skeletal remains

adds fixed year effects, the fourth adds the interaction between the index and the year dummies; and lastly, the fifth column includes the control, which is the population. The sixth and seventh columns represent the same estimate of equation 1, but in different time horizons, the sixth column covers the period between 1820-1970 and the seventh between 1970-2008.

TABLE 3. PER CAPITA GDP LOGARITHM AND LOGARITHM OF THE PURCHASE POWER OF EXPORTS

Per capita GDP Logarithm	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Purchase Power Logarithm Exports per capita	0.219***	0.236***	0.160***	0.009	0.009	-0.007	-0.032
	[0.015]	[0.011]	[0.012]	[0.024]	[0.024]	[0.037]	[0.028]
Index Interaction with Log Purchase Power	0.056***	0.005	0.004	0.126***	0.126***	0.055**	0.133***
	[0.011]	[0.007]	[0.007]	[0.022]	[0.022]	[0.026]	[0.030]
Index	-0.354***						
	[0.063]						
Population Logarithm					-0.006	0.532***	-0.648***
					[0.038]	[0.077]	[0.094]
Constant	7.204***	6.891***	6.612***	7.098***	8.419***	0.563	17.884***
	[0.080]	[0.037]	[0.071]	[0.178]	[0.582]	[0.954]	[1.299]
P-value Year*Index					0.012	0.00100	0
Fixed Effect Country		Sí	Sí	Sí	Sí	Sí	Sí
Fixed Effect Year			Sí	Sí	Sí	Sí	Sí
Index Interaction with Year Dummies				Sí	Sí	Sí	Sí
Period 1928-1970						Sí	
Period 1970-2008							Sí
Observations	1,233	1,233	1,233	1,233	1,233	598	619
R-squared	0.522	0.880	0.928	0.934	0.934	0.966	0.946

Robust standard errors in brackets   *** p<0.01, ** p<0.05, * p<0.1

The term $Ind_{j,1850-99} \cdot d_t$ identifies diverse economic trajectories related to the differences in the institutional changes in the new republics. A significant coefficient of this last term implies that the differences in economic performance after 1928 between countries was originated by the differences in the institutions created after the independences. The table shows the p-value of the global significance test that was done to the interaction between the year dummies and the index, because of space matters the table does not show each

interaction coefficient. This value shows that the interaction between years and the index is also significant.

The coefficient for purchase power of exports is positive and significant in the first three specifications. However, it stops being statistically significant when the interactions of the index with the years and the control are added.

The results show that the term of interest, which corresponds to the interaction between the institutional index and the variable of the logarithm of purchase power of exports, $Log\,PExp_{j,t} \cdot Ind_{j,1850\text{-}99}$, has a positive and significant sign in all of the estimated specifications, with the exception of the second and third. The coefficient β_t proves the hypothesis. It being significant indicates that the countries in fact experienced diverse economic paths given the difference in the quality and depth of the post-independence reforms, but that these differences are directly related to the maximization of opportunities offered by trade. That is, the gains offered by trade only impact economic performance in a positive way via institutions. As the new republics executed institutional reforms in favor of growth, they obtained greater economic benefit derived from trade.

The coefficient 0.126 of this triple interaction in column 5 implies that the gross domestic product per capita of a country with deep and speedy institutional trajectories, such as those of Costa Rica, is 64.7% higher ceteris paribus to the countries with poorer reforms, such as those of Mexico. This result[19] is the difference between income per inhabitant generated solely by institutional differences and is obtained with the following

calculation: 2.719×1.887×0.126, where 2.719 is the global change in the logarithm of the

purchase power of exports between 1950 and 2005; 1.887 is the difference between the highest index (Costa Rica) and the lowest (Mexico) and 0.126 is the beta.

As it is known, Brazil and Mexico were countries that began their republics with harmful legacies from the colony, slave systems, highly stratified societies, powerful and

---

[19] ΔPIB per capita = (ΔPurch. Power Exp per capita) · (Difference best ind &worst ind) · (β)

exclusive elites that derived into extractive institutions that affected the economic paths, lowering the possibility of making use of the economic opportunities that would maximize their performance. Opposite to this, Chile and Costa Rica were countries with egalitarian societies and more representative political systems. In this regard, these improved institutions allowed the maximization of the benefits derived from trade and obtaining better economic results.

Columns 6 and 7 indicate that the institutional index in favor of growth had a greater impact in the period 1970-2008 than in the period 1928-1970. Having had better post-independence institutional reforms had greater repercussions after 1970: the country with the highest quality reforms had a per capita GDP 25.7% higher between 1928 and 1970 than the country with the most deficient reforms. The difference in income per inhabitant between 1970 and 2008 between the country with the best institutions and the country with the worst ones is 68.3%.

ROBUSTNESS

In order to verify the validity of the above results, two additional econometric exercises were carried out. These consist of changing the independent variable Purchase Power of Exports Logarithm for another similar notion of economic opportunities provided by trade, understood as Benefits derived from Exchange[20] per capita. The variable $Benefit_{j,t}$ is the algebraic difference between the purchase power of export and their quantum. This concept intends to measure the gain or loss that the variations of the relative prices of foreign transactions represent for an economy. If the purchase power is greater than the quantum of exports the balance will be positive and therefore there will be a gain derived

---

[20] (Px/Pm)X-X o X(Px/Pm-1)

from trade[21]. Since this variable can take negative values (when the purchase power of exports is lower than the quantum of exports), two different variables were generated; one $PositivBene_{j,t}$ that only takes the positive values of the variable $Benefit_{j,t}$ and otherwise is zero; and another variable $NegativBene_{j,t}$ that only takes the negative values of the benefits of exchange, and is zero otherwise. These two estimations are represented in equations 4 and 5. The corresponding results are presented in table 4 and corroborate the robustness of the empirical strategy.

$$LogPib\ pc_{j,t} = d_t + \delta_j + \alpha_t Benefit_{j,t} + \beta_t Benefit_{j,t} \times Ind_{j,1850\text{-}99} + \sum_{t \geq 1928} \eta_t \times Ind_{j,1850\text{-}99} \times d_t + \varphi\, X_{j,t} + e_{j,t} \quad (4)$$

$$LogPib\ pc_{j,t} = d_t + \delta_j + \alpha_t PositivBene_{j,t} + \beta_t NegativBene_{j,t} + \gamma_t PositivBene_{j,t} \times Ind_{j,1850\text{-}99}$$
$$+ \gamma_t NegativBene_{j,t} \times Ind_{j,1850\text{-}99} + \sum_{t \geq 1928} \eta_t \times Ind_{j,1850\text{-}99} \times d_t + \varphi\, X_{j,t} + e_{j,t} \quad (5)$$

TABLE 4. GDP PER CAPITA LOGARITHM AND BENEFITS DERIVED FROM TRADE PER CAPITA

---

[21] Statistical Notebook number 1 of CEPAL. Latin America: List of Exchange prices.

GDP Logarithm per capita	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Benefit per capita	-0.001**	-0.000	-0.001***	-0.001***	-0.001***		
	[0.001]	[0.001]	[0.000]	[0.000]	[0.000]		
Index Interaction Benefit	0.0001**	0	0.001***	0.001***	0.001***		
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]		
Index	0.058*						
	[0.032]						
Positive Benefit							-0.001***
							[0.000]
Negative Benefit							-0.000
							[0.001]
Index Interaction Positive Benefit							0.001***
							[0.000]
Index Interaction Negative Benefit							0.000
							[0.000]
Population Logarithm						0.084*	0.057
						[0.044]	[0.042]
Constant	7.977***	7.505***	6.610***	6.798***	6.072***	6.484***	
	[0.043]	[0.088]	[0.073]	[0.135]	[0.556]	[0.552]	
P-value Year*Index						0.850	0.981
Fixed Effect Country		Sí	Sí	Sí	Sí	Sí	
Fixed Effect Year			Sí	Sí	Sí	Sí	
Index Interaction with Year Dummies				Sí	Sí	Sí	
Observations	1,234	1,234	1,234	1,234	1,234	1,316	
R-squared	0.013	0.568	0.910	0.914	0.914	0.909	

Robust standard errors in brackets   *** p<0.01, ** p<0.05, * p<0.1

The same 5 estimations described above were carried out, which correspond to the 5 first columns. The sixth column records the estimate of equation 5. Following table 4, the variable of benefits derived from exchange has a negative and significant coefficient in the first, third, fourth and fifth specification, indicating that the trade opportunities per se do not have a positive effect on economic performance. In fact, the coefficient of this variable indicates that as the purchase power is greater than the quantum of exports, the GDP per capita decreases. In other words, despite having gains from trade due to the variations of the prices of commercial transactions, these benefits have a negative effect on the economic performance of the country. The interaction of the index with the years is also significant, showing that the institutional trajectories did have an effect starting in 1928 on the economic performance of each country.

The coefficient of interest is again significant and positive in column 5, corroborating the hypothesis. Again, this shows that trade and the economic benefits derived from it can only be positively exploited if there are institutions that allow it. In other words, better quality reforms that were executed quickly allowed the countries to take advantage from trade´s benefits and this had a positive effect on the GDP per capita of each country. This coefficient indicates that the country that executed the best and quickest institutional reforms after its independence has a per capita GDP 18% higher than a country with more deficient trajectories. Again, this calculation was obtained by multiplying the difference between the best and the worst institution, the global change in the benefit per capita variable between 1950 and 2005; and the coefficient *(1.887✕ 95.59 ✕ 0.001=0.183).*

Column 6 proves the asymmetry of the institutional index constructed. That is, this index that simulates the institutional scenario after independence show that countries were able to exploit the benefits derived from trade only if this benefits were positives, if each nation was gaining from international trade. The coefficient in column 6 of the interaction between the index and the Benefit variable that takes positive values corroborates this, because when the benefits are positive, this interaction has a positive and significant effect, while when the Benefit variable takes negative values (there is a lost due to commercial activity), the interaction between the index and the negative Benefit is zero and is not statistically significant.

The results show that the term of interest that corresponds to the interaction between the institutional index and the variable that provides a notion of economic opportunity due to foreign trade has a positive sign and is statistically in the majority of the specifications. Therefore, these results suggest that the countries that had superior institutional trajectories understood as reforms with better quality, depth and applied quickly, were able to take advantage of the opportunities offered by international trade.

TABLE 5. LOGARITHM GDP PER CAPITA AND COMPONENTS OF THE INDEX

GDP Logarithm per capita	(1)	(2)	(3)	(4)	(5)
Purchase Power Logarithm Export	0.196***	0.186***	0.169***	0.161***	0.009
	(0.0607)	(0.0117)	(0.00890)	(0.00879)	[0.024]
Log Speed Interaction Purchase Power	-0.0345				
	(0.0932)				
Index Interaction (Sd-Mean) Purchase Power Log		0.0786***			
		(0.0134)			
Average Index Interaction Purchase Power Log			-0.000707		
			(0.00462)		
Index Interaction Standard Dev. Log Purchase Power				-0.0140***	
				(0.00513)	
Final Index Interaction with Purchase Power Log					0.126***
					[0.022]
Population Logarithm	-0.0214	-0.0271	-0.101**	-0.0801*	-0.006
	(0.0398)	(0.0382)	(0.0448)	(0.0415)	[0.038]
Constant	7.564***	7.602***	8.534***	8.352***	8.419***
	(0.490)	(0.401)	(0.371)	(0.331)	[0.582]
Observations	1,233	1,233	1,233	1,233	1,233
R-squared	0.933	0.932	0.934	0.933	0.934

Robust standard errors in brackets   indar robustos en corchetes *** p<0.01, ** p<0.05, * p<0.1

Table 5 shows the robustness of the index composition. The speed component and the depth component are not significant individually. The volatility component is however and has the expected sign, the greater the volatility in the institutional variables, the lower the economic performance. The coefficient of the final index is significant and positive, indicating that the construction index is valid, as some of its components on their own are not significant and the final index in fact is.

In addition, a simulation was run in order to compare the various economic performances with variations in the reforms executed in the early 19th century. The same equations 2 and 3 were simulated but the index of each country was substituted by the average of the index for all of the countries. This exercise allows for identifying the importance of the institutional trajectories and their effects on the economy. Equations 6 and 7 describe the simulations in question.

$$LogPibpc_{j,t} = d_t + \delta_j + \alpha_t LogVol_{j,t} + \beta_t LogVol_{j,t} \cdot \overline{Ind}_{j,1850\text{-}99} + \sum_{t \geq 1928} \eta_t \cdot Ind_{1850\text{-}99} \cdot d_t + \phi X_{j,t} + e_{j,t} \quad (6)$$

$$LogPibpc_{j,t} = d_t + \delta_j + \alpha_{Pt} LogPExp_{j,t} + \beta_t LogPExp_{j,t} \cdot \overline{Ind}_{j,1850\text{-}99} + \sum_{t \geq 1928} \eta_t \cdot Ind_{1850\text{-}99} \cdot d_t + \phi X_{j,t} + e_{j,t} \quad (7)$$

The results show that the countries that developed deficient institutions would have had significantly better economic results if they would have had the "average institutions" of the region. In countries such as Brazil, Mexico and Guatemala, the difference is significant. If these countries had had the average institutions of the region, they would have had incomes per capita 11.8, 14.8 and 11.4 percent higher than the current ones, respectively. In contrast, countries such as Chile and Costa Rica, which had exemplary institutional trajectories within the framework of the study, would have had remarkably inferior economic results: Chile would have had an income per capita 18.4 percent lower and Costa Rica 24.3 percent lower.

The rest of the countries that had institutions below the average, the simulation showed that they also would have had improved economic paths if they would have had the "average institutions" of the region. Argentina, for example, would have had a GDP per capita 6.2% higher and that of Colombia and Peru would have been 2.3% and 3.95% higher, respectively. This simulation is also done with equation 4, introducing as an independent variable the logarithm of purchase power of exports as an economic opportunity and the results had are closely similar[22].

TABLE 6. AVERAGE ANNUAL GROWTH WITH DIFFERENT INDICES

---

[22] See annex 4

Country	Growth Own Ind.	Growth Max Ind	Growth Min Ind	Growth U.S.A. Ind
Argentina	1.31	2.16	1.16	3.88
Bolivia	0.95	2.35	0.51	5.10
Brasil	2.23	1.55	0.34	3.31
Chile	1.99	1.96	0.39	4.52
Colombia	1.85	1.66	0.36	3.58
Costa Rica	2.13	2.55	0.60	5.18
Ecuador	1.73	2.89	0.63	6.33
Guatemala	1.47	1.96	0.41	4.35
Honduras	0.66	1.68	0.36	3.72
México	2.01	2.33	0.53	4.81
Nicaragua	0.31	2.21	0.49	4.70
Paraguay	0.91	2.07	0.46	4.36
Perú	1.46	1.79	0.38	3.92
El Salvador	1.48	1.60	0.30	3.75
Uruguay	1.34	1.73	0.38	3.71
Venezuela	1.60	2.56	0.47	6.26

Table 6 shows the average annual growth of each country if it would have had different index. It is clear that if the Latin American countries would have had the institutions of the United States their economic performance would have been considerably better; in the majority of cases growth would have been 4 times higher. For example, Bolivia would have had an annual growth of 5.15 percent with the reforms of the Unites States, instead of 0.95 percent annual with its institutional reforms. It is also worth pointing out that if Latin American countries would have had the institutions of Mexico in the 19th century, their growth would not have exceeded 1 percent.

VII. COLONY OR REPUBLIC?

It was shown that the institutional trajectories of the 19th century have a direct effect on economic performance; now the existing relationship between the colonial period and the reforms carried out after independence must be established. The results shown by the estimation of equation 2 show that harmful colonial activities affected negatively the institutional trajectories of the 19th century. Table 7 shows that an increase of one percentage point in the number of states of a country that had harmful economic activities reduces the institutional index by 0.05425 units, slightly less than the institutional difference between Colombia (1.181) and Peru (1.115). Considering that the difference between the

country with the highest index (Costa Rica) and the country with the lowest index (Mexico) is 1.888, an increase of 1% in the number of states with harmful activities decreases the index by 2.87%. Similarly, in the absence of harmful colonial activities, the index increases by 5.425, taking into account that the maximum value for the index is 2.53 (Costa Rica), a difference of 5.425 is extremely high. This estimation also shows that the pre-colonial population density negatively affects the index, as do the mining activities and average temperature of the country.

TABLE 7. INSTITUTIONAL INDEX AND COLONIAL ACTIVITIES

Institutional Index	(1)
Proportion of Harmful Colonial Activity	-5.425***
	(1.203)
Pre-colonial Population Density Logarithm	-0.336***
	(0.0641)
Mining Activity	-0.765**
	(0.285)
Plantations	0.275
	(0.264)
Pre-colonial Health Index Logarithm	0.290
	(0.304)
Average Annual Temp. (Celsius)	-0.089***
	-0.025
Average Annual Rainfall (mm)	0.034
	(0.124)
Capital City Altitude	-0.191
	(0.142)
Constant	4.442***
	(1.406)
Observations	17
R-squared	0.874

Robust standard errors in brackets   *** p<0.01, ** p<0.05, * p<0.1

It can be seen in table 8 that colonial activities positively affected the volatility of the institutional variables, that is, when a country had a higher proportion of states with harmful colonial activities, that country had greater variability in its political and institutional variables. The coefficient in column two, shows that the variable for colonial activities is not significant and does not affect the index constructed by the mean of the institutional and political variables. In the third and fourth column it is negative and significant, indicating that the presence of economies of scale and a high indigenous and slave population decreased the speed with which the reforms were carried out as well as their quality.

TABLE 8. RELATION INDEX COMPONENTS WITH COLONIAL INSTITUTIONS

VARIABLES	(1) Sd Index	(2) Media Index	(3) Speed Weight	(4) Composite Index
Proportion of Harmful Colonial Activity	3.895***	-1.001	-0.519***	-2.448**
	(1.213)	(1.809)	(0.172)	(0.958)
Pre-colonial Population Density Logarithm	0.0860	-0.317***	0.00113	-0.202***
	(0.0651)	(0.0971)	(0.00925)	(0.0514)
Mining Activity	-0.375	-0.198	-0.0528	0.0886
	(0.261)	(0.389)	(0.0370)	(0.206)
Plantations	-0.500**	-0.103	-0.0604*	0.198
	(0.223)	(0.333)	(0.0317)	(0.176)
Pre-colonial Health Index Logarithm	2.099***	1.400***	-0.00640	-0.349*
	(0.255)	(0.380)	(0.0362)	(0.201)
Average Annual Temp. (Celsius)	0.0306	-0.0943*	-0.00278	-0.0624**
	(0.0312)	(0.0466)	(0.00444)	(0.0247)
Average Annual Rainfall (mm)	-0.366***	-0.361**	-0.0466***	0.00240
	(0.109)	(0.163)	(0.0155)	(0.0862)
Capital City Altitude	0.213	-0.236	0.00394	-0.224*
	(0.150)	(0.224)	(0.0214)	(0.119)
Constant	-7.148***	-3.625*	0.931***	1.762*
	(1.213)	(1.808)	(0.172)	(0.958)
Observations	40	40	40	40
R-squared	0.821	0.667	0.709	0.672

Robust standard errors in brackets   *** p<0.01, ** p<0.05, * p<0.1

In order to compare the historical importance on the economic performance of the colony and the post-independence institutional trajectories, equation 3 was estimated. This equation was also estimated by introducing the variable Benefits derived from exchange. Table 9 shows that the interaction between the institutional index and the two variables that give notion of commercial opportunities and their repercussions on economic performance. Of column 1, it can be inferred that the interaction between the index and the Logarithm of Purchase Power of Exports is positive and significant once again. The differences between the income per inhabitant explained only by the differences in the institutions in favor of growth is 67.94%[23], that is, that Costa Rica (the country with the highest index) had a GDP

---

[23] Calculation 4.005×1.887×0.089. Where 4.005 is the global change of the logarithm variable of the Purchase Power

of Exports between 1950 and 2005, 1.887 is the difference between the highest index and the lowest and 0.089 is the beta.

per capita 67.94% higher than Mexico's (the country with the lowest index). In contrast, the interaction between the variable of proportion of colonial activities[24] and the variable Logarithm of the Purchase Power of Exports is significant and negative, suggesting that the colonial period had negative effects on the long-term economic performance. In particular, the presence of harmful colonial activities decreased the GDP per capita by 11.63% for the country that had the highest presence of these harmful activities (Brazil) with respect to the countries that did not have harmful colonial activities such as El Salvador, Guatemala and

Uruguay. This result was obtained with the following calculation: 4.005×0.481×-0.0603,

where 4.005 is the global change in the variable Logarithm of the Purchase Power of Exports between 1950 and 2005, 0.481 is the difference between the country with highest proportion of colonial activities (Brazil) and the one with lowest (El Salvador, Guatemala and Uruguay) and -0.0603 is the beta. It must be emphasized that the magnitude of the impact of the colony is significantly lower than that of post-independence institutions, indicating that it was in fact the institutions that arose in the new republics that had a greater impact on the income per capita of Latin American countries in comparison with colonial practices.

Regarding column 2, the interaction between the institutional index in favor of growth and the variable Benefits derived from trade, continues to be significant and its coefficient is very similar to the previous estimates (0.0001); indicating that in fact the quality of the reforms that were carried out after independence affected economic development, allowing the maximization of the trade opportunities. Having had the best post-independence institutions increased the GDP per capita by 539.105 dollars[25] in comparison of having had the most deficient institutional reforms.

Opposite to this, the interaction between the variable of harmful colonial activities

---

[24] See annex 4.

[25] This calculation was done in the following way: 2851642×1.887×0.0001. Where 2851642 is the global change of the variable Benefit between 1950 and 2005, 1.887 is the difference between the highest index and the lowest, 0.0001 is the beta. [ ]

and the variable of the benefits from exchange is positive but is not significant, indicating that the colonial era had repercussions on the entry paths through the legacy that it left on the institutions of the rising republics and not directly.

TABLE 9. COMMERCIAL OPPORTUNITIES AND HARMFUL COLONIAL ACTIVITY

Logaritmo PIB per cápita	(1)	(2)
Purchase power Logarithm Export	0.0089	
	[0.021]	
Exchange Benefit		-0.0002**
		[0.000]
Index Interaction Log Purchase Power	0.0899***	
	[0.018]	
Benefit Index Interaction		0.0001***
		[0.000]
Harmful Act Interaction Purchase Power	-0.0603***	
	[0.018]	
Benefit Harmful Act Interaction		0.000
		[0.000]
Population	0.0000***	0.0274***
	[0.000]	[0.002]
Constant	7.1208***	-514.9
	[0.366]	[1,170.2]
P-value Year*Index	0.000	0.003
Fixed Effect Country	Sí	Sí
Fixed Effect Year	Sí	Sí
Index Interaction with Dummies Year	Sí	Sí
Observations	1,056	1,056
R-squared	0.966	0.899

Robust standard errors in brackets   *** p<0.01, ** p<0.05, * p<0.1

VIII. Conclusions

<mark>Aca!</mark>

The Iberian colonial regimes, their practices and policies, and the States derived from such practices imposed a wide range of institutional constraint on the productive initiatives in the New World. As a consequence, the 19th century ended with a series of deficiencies that are attributable to the colony: high economic inequality, control of the government by an economic elite, exclusion of common interests and lastly, poor institutions that failed to protect the property rights and human rights of the majorities.

The patterns that were observed in the early 19th century were maintained over the following years. Hence, the evidence seems to support the existence of a '*path dependence*' as, with the notable exception of Chile, the less successful exporters did not manage to change their relative position during the entire 19th century, while the most successful exporters continued to lead the region.

The colonial legacy, not the origin of the colonizer, left large distortions that hindered the development of Latin American countries. After the colony, the new nations had elevated political risks associated with unpredictable policies, high transaction costs due to the inefficiency in property rights and a high tax burden; high rates of corruption in the legal system, persistence of archaic forms of land ownership, primitive tax systems and a short supply of public goods. All in all, these institutional constraints constituted colossal obstacles against development and the maximization of economic opportunities.

This article highlights the importance had by the institutional trajectories that molded the new republics on the economic performance of the region and documents that a large part of the economic divergence in the zone arose from the post-independence institutional design. As better reforms were executed, superior institutions that were representative, democratic, inclusive and that guaranteed good property rights allowed each country to take advantage of the economic opportunities offered by trade.

Apparently, the economic differences of the region arose depending on how well the economic opportunities of the time were exploited, that is, how much the exemplary institutions allowed for the maximization of the benefits from such circumstances. This contradicts important views from the economic literature that attribute the divergent economic paths to geographical, colonial, religious and cultural matters. This paper shows that if these factors are important, it is due to the interaction that they have with post-independence institutional design.

It is suggested that foreign trade contributed to the growth of each Latin American country by an institutional channel. Institutions that provided solid property rights and had high constraints on the executive allowed for all of the advantages offered by trade to be maximized in such a way that the benefits of this activity were spread throughout the society in a more generalized way. These benefits distributed equally among society were in turn guarantees for investment in inclusive and representative institutions, that respected

property and were concerned about reducing transaction costs and providing more public goods. Therefore, nations with stable property rights traded more, invested more, fostered more representative institutions and achieved greater economic growth.

It is known that there are infinite social and economic aspects of the development of Latin American countries that are not covered in the analysis. However, the intent of the article is not to provide a single explanation for the divergent economic paths experienced by the countries of the region, but instead to emphasize on the importance of post-independence institutional trajectories in this development process. It is important that the neo-institutionalist current consider new explanations for the Latin American economic lag, as it gives too much weight to the colonial period and to its long-term effects, downgrading the importance of other transformations of great relevance in history, such as the Bourbon reforms, independence, the liberal reforms, the abolition of slavery and the industrial revolution, which doubtlessly also changed the economic scenario of the region.

In conclusion, the rhythm and depth of the reforms on property rights, transaction costs and representativeness, by way of legal and civil codes, judicial systems, tax structures and trade regulations, determined the relative success / failure of Latin American countries. Although independence offered to most Latin American countries opportunities for institutional and political modernization, these opportunities were not taken advantage of. Most countries of the region entered into conflict and internal disputes as well as international wars that lasted decades. The weight of the colonial institutional legacy after independence proved to be stronger in the regions where the pressure for modernization antagonized interest groups linked to exclusive systems. In Mexico, for example, the conservatism of the Church and the creole magnates delayed institutional modernization for decades after independence. Opposite to this, in Chile and Costa Rica institutional modernization reduced this barriers more than in the other countries, while in Brazil and Peru, although they had prolonged periods of peace, they inherited weak and centralized governments from the colony.

ANNEXES

1. DATABASE DESCRIPTION POLITY IV

Restriction to the Executive (XCONST): Executive (de facto) power

(1) = Unlimited Authority   (2) = Intermediate Category
(3) = Moderate Limitation   (4) = Intermediate Category
(5) = Substantial limitation   (6) = Intermediate Category
(7) = Parity or Subordination of the Executive

Democracy (DEMOC)

 0 = low democracy; 10 = high democracy

Electoral Transparency (XRCOMP): Institutional processes related to the transfer with which the executive is elected.

(0) = Not regulated   (1) = Selected
(2) = Designation   (3) = Regulated

Popular Accessibility to the Executive (XROPEN): Level to which the majorities can access political power.

(0) = Not Regulated   (1) = Closed

(2) = Dual/Designation   (3) = Dual/Election

(4) = Open

Institutional Independence (de jure) of the Executive (MONO): Independence (de jure) of the executive.

(1) = Solely individual   (2) = Intermediate Category

(3) = Qualified Individual   (4) = Intermediate Category

(5) = Collective Executive

Political Expression (PARREG): Development of the institutional structures in favor of political expression.

(1) = Not Regulated   (2) = Transitory

(3) = Restricted Factional   (4) = Restricted

(5) = Institutionalized

Competitiveness of the Political Participation (PARCOMP): Degree to which the majorities have access to institutional structures of political expression.

(0) = Not Regulated   (1) = Suppressed

(2) = Restricted/Transitory   (3) = Factions

(4) = Transitory   (5) = Competitive

2. INDEX BY PRINCIPAL COMPONENT ANALYSIS

The index of the average was calculated with the average of the political variables. The first component explains 50% of the variability of the data. As the value of the index grows, the institutional scenario of each country is better in quality, that is, the depth with which the reforms were carried out was greater. The index of the standard deviation was built with the standard deviation of the political variables. The first component explains 43.61% of the variability of the data. As the value of the index grows, the index indicates that there was high volatility in the policy and in the creation of institutions. Since the index had negative values, 2.268 was added to all of them so the country that had the lowest index would have a minimum value of 1.

DEPTH INDEX, SPEED WEIGHT AND FINAL INDEX

	Depth	Speed	Final Index

	Profundidad	Velocidad	Índice Final
Argentina	2.378	0.417	0.990
Bolivia	1.205	0.904	1.089
Brasil	1.868	0.407	0.760
Chile	2.940	0.707	2.080
Colombia	1.736	0.680	1.181
Costa Rica	3.366	0.751	2.527
República Dominicana	2.905	0.636	1.848
Ecuador	2.177	0.547	1.190
Guatemala	1.170	0.666	0.780
Honduras	2.706	0.599	1.621
México	1.000	0.639	0.639
Nicaragua	2.653	0.619	1.643
Paraguay	1.642	0.494	0.812
Perú	1.565	0.712	1.115
El Salvador	2.177	0.615	1.339
Uruguay	1.925	0.664	1.278
EE.UU.	4.919	0.948	4.663
Venezuela	2.484	0.682	1.695

REFORM DATES

	First Constitution	Abolition of slavery	Trade Code	Civil Code
Argentina	1853	1853	1862	1869
Bolivia	1826	1831	1834	1831
Brasil	1824	1888	1850	1916
Chile	1833	1823	1865	1855
Colombia	1819	1851	1869	1858
Costa Rica	1821	1824	1853	1885
República Dominicana	1844	1844	1884	1845
Ecuador	1830	1852	1882	1859
Guatemala	1824	1824	1877	1877
Honduras	1824	1824	1889	1886
México	1824	1829	1884	1871
Nicaragua	1838	1838	1869	1867
Paraguay	1830	1869	1865	1876
Perú	1823	1854	1853	1852
El Salvador	1824	1824	1905	1860
Uruguay	1830	1830	1865	1869
Venezuela	1819	1854	1862	1862
EE.UU.	1787	1865	.	1803
Maximum	1853	1888	1905	1916
Minimum	1787	1823	1834	1803
Range	66	65	71	113

3. Simulation with Average Index (Percentage Difference)

Country	Log Volume Traded (Equ. 4)	Log Purchase Power (Equ. 6)
Argentina	6.250	6.634
Bolivia	5.151	5.196
Brasil	11.797	12.657
Chile	-18.395	-20.336
Colombia	2.262	2.417
Costa Rica	-24.332	-26.583
República Dominicana	0.000	-9.425
Ecuador	2.866	3.509
El Salvador	0.181	0.459
Guatemala	11.381	12.185
Honduras	-5.423	-5.966
México	14.754	15.775
Nicaragua	-5.287	-5.018
Paraguay	10.792	11.510
Perú	3.951	4.287
Uruguay	0.869	0.704
Venezuela	-10.346	-10.868

4. Proportion of Harmful Colonial Activities

Country	Proportion Harmful Colonial Activity
Argentina	0.083333
Bolivia	0.222222
Brazil	0.481481
Chile	0.230769
Colombia	0.2
Costa Rica	.
Dominican Republi	.
Ecuador	0.363636
El Salvador	0
Guatemala	0
Honduras	0.388889
Mexico	0.28125
Nicaragua	.
Paraguay	0.055556
Peru	0.416667
Uruguay	0
Venezuela	0.210526

BIBLIOGRAPHY

· Acemoglu, D., Johnson, S. and Robinson, J. (2001). "The Colonial Origins of Comparative Development: An Empirical Investigation". American Economic Review.

· Acemoglu, D., Johnson, S. and Robinson, J. (2002). "Reversal of Fortune: Geography and Institutions in the Making if the Modern World Income Distribution". Quarterly Journal of Economics, v117, n4, 1231-94.

· Acemoglu, D., Johnson, S. and Robinson, J. (2004). "Institution as the Fundamental Cause of Long Run Economic Growth". CEDE Document.

· Acemoglu, D., Johnson, S. and Robinson, J. (2004). "The Rise of Europe: Atlantic Trade, Institutional change and Economic Growth" American Economic Review.

· Allen, R. C. (2005). Real Wages in Europe and Asia: A First Look at the Long-Term Patterns. In R. C. Allen, T. Bengtsson & M. Dribe (Eds.), Living Standards in the Past (pp. 111-130). Oxford: Oxford University Press.

· Azcuy, E., y Biroco, C., "Las colonias del Río de la Plata y Brasil: Geopolítica, poder, economía y sociedad (Siglos XVII y XVIII)" en *El Cono Sur: Una Historia Común*, (Compilers Rapoport, M. y Cervo, A.), Fondo de Cultura Económica, Buenos Aires, 2001, pp. 11-70.

· Bates, R., Coatsworth, J. and Williamson, J. (2006), "Lost Decades: Post Independence Performance in Latin America and Africa" *Journal of Economic History*, Vol. 67, No. 4 pp. 917-943.

· Bandyopadhyay, S. and Green, E. (2010) "The Reversal of Fortune Thesis Reconsidered". University of Birmingham and LSE press.

· Bértola, Luis. (2010) "Institutions and the Historical Roots of Latin American Divergence". CEPR discussion article.

· Bértola & Ocampo (2011) "Desarrollo, vaivenes y desigualdad". Secretaría General Iberoamericana.

· Bértola, L. & J. Williamson (2006), "Globalization in Latin America before 1940", in Bulmer- Thomas, V., Coatsworth, J. and Cortés Conde, R. (ed.) The Cambridge Economic History of Latin America.

· Besley, T. & Persson, T. (2009). "The Origins if the State Capacity: Property Rights, Taxation and Politics" .

· Bruhn, M. and Gallego, F., (2007) "Good, Bad, and Ugly Colonial Activities:

Studying Development across the Americas," *Unpublished manuscript.*

· Bulmer-Thomas, V. (1994), The Economic History of Latin America Since Independence (Cambridge: Cambridge University Press).

· Coatsworth, J. (1967). "American Trade with European Colonies in the Caribbean and South America, 1790-1812". The William and the Mary Quarterly, 3rd Ed. v24, No. 2, 243-266.

· Coatsworth, J. (1998). "Economic and Institutional Trajectories in Nineteenth-Century Latin America". In: Latin America and the World Economy Since 1800. (Ed. Coatsworth, J. and Taylor, A.). Harvard University Press, chp. 1: 23-53.

· Coatsworth, J. (2005) "Structures, Endowments, and Institutions in the Economic History of Latin America", *Latin American Research Review,* Vol. 40, No. 3, October 2005, pp. 126-144.

· Coatsworth, J., "Political Economy and Economic Organization" in *The Cambridge Economic History of Latin America* (Edited by Bulmer-Thomas, V., and Coatsworth, J, and Conde, R.,), Cambridge University Press, New York, 2006, Vol. 1, Chp 7, pp. 237-273.

· Coatsworth, J., "Globalización y bienestar en América latina". Fractal magazine n° 37, 2005.

· Coatsworth, J. (2008) "Inequality, Institutions and Economic Growth in Latin America", Journal of Latin American Studies.

· Coatsworth, J. y Williamson, J. (2004). "Always Protectionist? Latin American Tariffs from Independence to Great Depression", *Journal of Latin American Studies* V. 36:205-232.

· Dell, M. (2009). "The Persistent Effects of Peru's Mining Mita". (Forthcoming Econometrica) Massachusetts Institute of Technology. Department of Economics. http://econ-www.mit.edu/files/3144. May.

· Dobado, R. (2009). "Herencia Colonial y Desarrollo Económico en Iberoamerica", Work Document Faculty of Economic and Enterprise Sciences Universidad Complutense de Madrid.

· Dye, A. (2006), "The Institutional Framework" in Bulmer- Thomas, V., Coatsworth, J. and Cortés Conde, R. (ed.) The Cambridge Economic History of Latin America.

· Elliot, J.H "La ocupación" en *Imperios del Mundo Atlántico,* Editorial Taurus, Madrid, 2006, pp. 27-185.

· Engerman, S & Sokoloff, K. (2000). "Institutions, Factor, Endowments, and Paths of Development in the New World". Journal of Economic Perspectives, v14, n3,

217- 232.

· Engerman, S., "Slavery and Its Consequences in the South in the Nineteenth Century" in *Cambridge Economic History of the United States* (Edited by Engerman, S. and Gallman, R.) Vol 2, Chapter 8, Cambridge University Press, New York, 1996, Chp, pp. 329-366.

· Galenson, D., "The Settlement and Growth of the Colonies: Population, Labor and Economic Development" in *Cambridge Economic History of the United States* in Engerman, S. and Gallman, R (Editors) .) Vol 1, Chapter 1, Cambridge University Press, New York, 1996, Chp, pp.135-207.

· Glaeser, E., La Porta, R., Lopez de Silanes, F. Y Shleifer, A (2004). "Do Institutions Cause Growth?". Journal of Economic Growth.

· Haber, S. y Klein, H., "Economic Consequences of Brazilian Independence" in Haber, *How Latin America Fell Behind,* pp. 243-59.

· Haber, S., Razo, A., and Maurer, N., (2003) *The Politics of Property Rights*, Cambridge University Press, pp. 1-79

· Kalmanovitz, S. (2001)"Las Instituciones Colombianas en el Siglo XX". Economic Studies of Banco de la República.

· Kalmanovitz, S. "Las consecuencias económicas de la Independencia en la América Latina". Cepal Document.

· Landes, David S. (1999). "*La riqueza y pobreza de las naciones".* Barcelona: Editorial Crítica.

· Lange, M., Mahoney, J. and Vom Hau, M. (2006). "Colonialism and Development: A Comparative Analysis of Spanish and British Colonies". American Journal of Sociology.

· Levine, R., Loayza, N. & Beck, T. "Financial intermediation and growth: Causality and causes".

· Lockhart, J., y Schwart, S. (2005) "Indigenous Ways" in *Early Latin America: a History of Colonial Spanish America and Brazil.* Chapter 2, pp 31-57.

· Lockhart, J., y Schwart, S. (2005) "Origins and Early Maturity" in *Early Latin America: a History of Colonial Spanish America and Brazil.* Chapter 2, pp 59-121.

· Mariscal, E. and Sokoloff., (2000) "Schooling, Suffrage and the Persistence of Inequality in the Americas, 1800-1945" in Stephen, H (Editor), *Political Institutions and Economic Growth in Latin America,* Hoover Institution Press.

· Matson, C., "The Revolution, the Constitution and the New Nation in *Cambridge Economic History of the United States* (Edited by Engerman, S. and Gallman, R.) Vol 1,

Chapter 9, Cambridge University Press, New York, 1996, Cap, pp. 363-401.

· North, D., and Thomas, R, (1973) "The Rise of the Western World: A New Economic History", Cambridge University Press, 1972; Pp. 179-

· North, D., Summerhill, W. and Weingast, B. (2000) "Order, Disorder and Economic Change: Latin America vs. North America". Yale University Press, 2000.

· Nugent, J., and Robinson, J. (2005) "Are Endowments Fate? On the Political Economy of Comparative Institutional Development", unpublished, Harvard University.

· Prados de la Escosura, L., "The Economic Effects of Latin American Independence", *Cambridge Economic History of Latin America,* vol. 1, pp. 463-504.

· Rouquie Alain. 1994. "The military in Latin American Politics since 1930". In Leslie Bethell (ed.), The Cambridge History of Latin America, Vol VI. Cambridge University Press.