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**ECONOMIC DEVELOPMENT AND COLONIAL CULTURE:  
HAS SPANISH CULTURE SLOWED ECONOMIC GROWTH  
IN LATIN AMERICA?**

## *Introducción*

The empirical literature on economic growth has shown that political instability has a negative effect on economic development and growth.<sup>1</sup> While this in itself is an interesting empirical phenomenon, it leaves unanswered the question as to why some countries are more prone to instability than others. This paper seeks to answer why some countries have fared better than others within the Latin American region. The development literature has often pointed to the Spanish legacy as one of the main culprits behind Latin America's failure to develop as quickly as the United States and Canada.<sup>2</sup> This paper looks to see whether the Spanish legacy has affected development within Latin America as well, not just in comparison to her northern neighbors.

I find that the Latin American countries with the most exposure to Spanish rule are also the ones that have had the most amount of development difficulties.<sup>3</sup> Using a ranking of "degree of colonial penetration" constructed by Palmer (1977) to classify the different countries by high, medium, and low amounts of Spanish colonization, I find that, on average, the more heavily colonized countries are also the ones with the lowest per capita income levels. I also look at an oft-mentioned reason for why the former Spanish colonies have fared so poorly; namely, their inability to maintain stable and democratic political systems. The region as a whole has not been noted for its political stability (in fact, quite the opposite), but I do find that the more heavily colonized countries are also the ones that have been dominated by non-elective, executive rule, marked by frequent coups and a greater importance

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<sup>1</sup> See Barro (1989), Clague et.al. (1993), Olson (1991, 1993), and Fosu (1992) for a look at how instability has affected real GDP growth in various countries.

<sup>2</sup> See Andreski (1966), Harrison (1985), Rangel, (1977) and Grier (1997a, 1997b) for a discussion of the many ways in which Latin America inherited Spanish culture and how this legacy has affected economic development. On a lighter note, Christopher Fildes, in the *Spectator*, November 19, 1988, has the following to say about Latin America,

"A City friend has confided to me the secret of his successful investment policy. Never, he says, invest in a country which has previously been governed by Spain. This principle has kept him out of trouble, not only in the greater part of most of South America (Brazil and its Portuguese rulers he had to work out for himself) but also in such notorious traps as the Philippines, Mexico, California (think what he could have saved the Midland), and Texas--where everything is the biggest, including the bank failures. Pleased with his policy, and anxious to apply it liberally, my friend has discovered a catch in it--what should he do about the fashionable notion of investing in Spain? My advice is that he should think of Spain as a country previously governed by the Moors." (Veliz (1994), 2)

<sup>3</sup> See Temin (1997) for an interesting look at how culture can affect economic development.

placed on the military. Thus, this paper sheds some light as to why some countries are more politically prone to instability than others.

Section II reviews the literature on Spanish colonization and its effect on subsequent economic development in Latin America, focusing specifically on the argument that the Spanish legacy has caused political instability and authoritarianism in the region. Section III looks at the variables used to measure the degree of Spanish colonization and talks about the empirical applications of the paper. Section IV explains the results of estimating a regression on real per capita income levels in Latin America and what happens when a variable representing "degree of colonization" (SPAN) is included in the estimation. Section V talks about the correlation that I find between the more colonized countries and political instability. Section VI discusses the results of the paper and the potential for future work on this topic.

### *Latin America and Underdevelopment*

At the beginning of the 18th century, there was little reason to believe that Latin America would fare so poorly in comparison to her northern neighbors. The region was (and continues to be) rich in natural resources and many observers predicted a bright future for the former Spanish colonies.<sup>4</sup> The economic record of the region has been consistently poor and unstable, and most of the Latin American countries are still be classified as developing. The 1996 World Development Report places only Chile, Mexico, Argentina, and Uruguay in the "upper-middle income" category of countries. Not one of the Latin American countries is classified as a "high income" economy.<sup>5</sup>

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<sup>4</sup> Harrison (1985) quotes Carlos Rangel as stating, "As late as 1700, the Spanish American empire still gave the impression of being incomparably richer (which it was!), much more powerful, and more likely to succeed than the British colonies of North America." Providing support for this argument, Rangel (1977,21) states,

"Mexico City, Lima, and a score of other Spanish American centers were already important cities at a time when the British were still trying to build up their settlements in North America. Mexico's first printing house dates back to 1548. The Universities of Mexico and Lima were founded in 1551. In 1576, there were in Spanish America no fewer than 9 courts of justice, 30 central administrations, 24 treasurers general, 3 mints, 24 bishoprics, 4 archbishoprics, and 306 monasteries...By way of comparison, Boston was not founded until 1630; at the end of the 18th century neither that city nor Philadelphia nor New York could bear comparison with the viceregal cities of Spanish America. The population of the North American colonies was still largely rural."

<sup>5</sup> World Bank, 1996, World Development Report 1996: From Plan to Market, Oxford University Press.

Theories abound as to why Spanish colonization might have had a dampening effect on development in the New World. One of the major reasons social scientists give to support this argument is that Latin America inherited a political culture from Spain that is not conducive to stability and economic growth. The Spanish political legacy is said to be characterized by a strong respect for and affinity of hierarchical structures, a disdain for democracy and power sharing, and an inordinate role given to the military in national politics. I talk briefly about each in the paragraphs below.

### *Authoritarianism*

It has often been noted that Spain and her former colonies have shown a predilection toward strong, centralized government (often in the form of dictatorship). In his study of the Hispanic character, Henry Wells argues that one of the major characteristics of the Hispanic world view is that "society is naturally hierarchical and one's position depends on one's birth." The Spanish colonial system was extremely centralized, with Spain making all economic and political decisions for her colonies.

The wars of independence at the beginning of the 19th century left a political power vacuum in the Latin American region. Andreski gives an excellent description of the anarchy that reigned after Spanish independence; "For long periods after independence many countries of Latin America had no government at all; warring bands disputed the ownership of the land, and the capital fell to each of them in turn. When one of the war-lords finally succeeded in subduing his rivals anarchy would subside, but the order thus established seldom survived the death of the tyrant, and usually collapsed even before then. The structure of this type of government is simple: the chief of the victorious faction installs his henchmen as generals, ministers and officials; and the functions of the govt are limited to enforcement of obedience and exaction of wealth." (p. 127).

Spanish American political history has been marked by strongmen who have been motivated mostly by greed (for both money and power) instead of ideology.<sup>6</sup> Decentralization of political power has tended to come about not because of some ideological principle, but because of a weak executive with trouble dominating the regional warlords. Even in countries where an elected legislature existed, there have been very few checks on executive power.<sup>7</sup>

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<sup>6</sup> About this lack of ideology, Andreski states, "Normally, neither the partisans of the caudillo nor his enemies were guided by an ideology, despite frequent professions to the contrary. Usually they were simply bands of men thrown together by chance, and only in the heat of the struggle did they occasionally develop some cohesion...the great majority viewed power solely as the means of assuaging their vanity, cupidity and desire for the pleasures of the flesh." (p. 131)

<sup>7</sup> . De Soto, in his study of Peru, states that 99% of the central government's rules came from the executive branch, with no "public consultation or control." He continues, stating that

While a highly centralized system of government can be conducive to growth and development, it can just as likely cause uncertainty and instability. When all power is centralized in the hands of one person, and that person will eventually be overthrown or die in office, there is always an uncertainty over the future of the country.<sup>8</sup> Politics in the Latin American region has been incoherent and unstable, both under democratic and authoritarian regimes.

### *Democracy*

The predilection toward strong, centralized power has also meant that democracy has (until recently) failed to find much of a following in the region. As Wells explains, "Hispanic peoples have never found democracy particularly attractive precisely because they attach little value to widely shared power." In the last decade, the notion that Latin America would always be run by non-democratic regimes has died out. Most of the countries in the region have established representative democracies that seem to be relatively stable and permanent.<sup>9</sup> While empirical studies of development have failed to find a strong connection between democracy and real economic growth, Clague et.al.(1993) argue convincingly that it is the institutions associated with democracy, and not democracy itself, that help to promote growth and development. More specifically, regimes that promote stability, and uphold a rule of law and private property rights are more likely to succeed economically. A benevolent dictator is theoretically able to promote such long-sighted institutions, and there are policies, especially unpopular, austerity-minded ones, that a dictator can enact without worrying much about public opinion.<sup>10</sup>

Empirically, what seems to matter for real GDP growth is political stability, a situation most often found in developed democracies (see endnote 1 for a look at the

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since 1947, the executive branch has passed an average of 27,000 laws, while Parliament has only averaged 358.

<sup>8</sup> Rangel, writing in 1977, documents the persistent political instability that has plagued Latin America since independence from Spain,

"Mexico is the only Spanish American country that in the last 50 years has not experienced any changes of government by civil war or military coup d'etat. On the other hand, it experienced at least 46 irregular changes of government in the first quarter century of its independence. In Venezuela, no fewer than 50 civil wars occurred in less than one century...In Bolivia there have been one hundred and sixty civil wars or coups d'etats from 1835 to the present: an average of more than one a year." (p. 219)

<sup>9</sup> Gurr et. al. (1990, 90) are skeptical about the durability of Latin American democracy, stating, "The beginning of the much celebrated contemporary trend toward democratization in Latin America since the mid-1970s is evident, but in view of the historical pattern of political swings back toward autocracy, impelled as much by international as domestic factors, the 'trend' should be regarded as a fragile one."

<sup>10</sup> For arguments on how authoritarianism can be more conducive to economic growth than democracy, see Linz and Stepan (1978), O'Donnell (1973), and Collier (1979).

literature on economic growth and political stability). Politics in Latin America has been, on average, unstable both under dictatorships and under democracy. In their analysis of the growth of state power, Gurr et. al. (1990) explain the political culture of Latin America;

Underlying the trends we have observed is the pervasive failure of most Latin American societies to establish coherent, institutionalized political systems of the either democratic or autocratic type. The typical Latin polity has had "mixed" authority traits: Caesaristic transfers of power, factional-restricted participation and executive constraints that fall between the 'substantial/parity' limits characteristic of European democracies and 'slight to none' limits characteristic of European autocracies. When coherent autocracies have been established in Latin America their institutions usually were too weak to outlast the founding elite. (p. 94)

So, while it is uncertain whether democracy really promotes development and growth, it is clear that more stability and long-sightedness would have considerably helped Latin American economic development

### *The Military*

The third characteristic of the Spanish political legacy is a disproportionate amount of power given to (or taken from) the military. The countries which have either eliminated or reduced the power of the military, Costa Rica and Mexico, have fared much better economically and have been consistently more stable than the other countries in the area. Harrison, in his examination of culture and development, states,

...neither Spain nor its former colonies were able to institutionalize civilian control of the military, who typically saw themselves as above the constitution (which was usually not respected by other elements in the society in any case). Between 1814 and 1876 the Spanish military tried to overthrow the govt on 35 occasions, succeeding 11 times (p. 52).

There is a large difference between the American Revolution and the various Latin American wars of independence against Spain. Americans had already established self-government and wanted Britain out of their personal affairs. Rangel describes it as thus, "By 1735, the Americans had secured the rights of free speech and free press, of free assembly and of self-government. They fought the War of Independence not so much to win these liberties, for they had already enjoyed them, but to confirm them and give them a proper legal base." (p. 197) The Spanish colonies, on the other hand, had no independent self-governing institutions in place when the independence wars were fought. The only type of governance that Spain had allowed was centralized political power from herself. Thus, when the wars were

finished, they left in their wake a great political vacuum that came to be filled by military strongmen.<sup>11</sup>

The military have often been able to dictate national politics, and if an elected executive fails to implement their wishes, they have shown no hesitation in overthrowing him and putting in place their own puppet executive (or ruling themselves).<sup>12</sup> The Latin American countries that have had the strongest militaries are also the ones that have tended to have the most amount of political instability. As shown in Table 1c, the correlation coefficient between a variable measuring the number of coups a country has had and a variable measuring the importance of the military is .87. The correlation coefficient between the coup variable and the number of years the country has been ruled by the military is .46. While not a perfect measure of instability, the number of coups a country has suffered is a good proxy of political instability. The correlation between coups and military strength implies that the Latin American countries with the strongest militaries have also been the most unstable, which supports Stepan's (1973) finding that military spending is correlated with political instability.<sup>13</sup>

### *The empirical model*

In both empirical applications of the paper, I convert economic data from the Penn World Tables from 1965-1990 into 5-year averages, with a total of 85 observations. I start the sample at 1965 to match up with the Kyriacou (1991) data on human capital. I do not average over the entire forty year period because doing so could result in a loss of information, with cross country variations driving all of the results. The dependent variable is real per capita income; the independent variables are

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<sup>11</sup> Rangel states, "Each single country, each region, even each village, was able to re-establish peace only by appealing to a caudillo for protection. It may be said that a primitive feudalism developed; it was natural for this kind of social structuring to emerge, for it reinforced the existing pattern of the haciendas, the virtually autonomous social units on which the agricultural economy was based even before the fall of the Spanish empire. At the start, there were as many caudillos, or war lords, as specific geographic conditions permitted, each lord exerting his authority over a limited territory." (p. 220)

<sup>12</sup> Nunn, in his look at European Military Missions in Latin America, argues that the professionalism of the military in Latin America has led to more, rather than fewer, interventions into national politics. He concludes by stating, "the overriding impact of fifty years of European military training or orientation on Latin American armies was to stimulate rather than lessen political interest and to motivate elitist, professional army officers to assume responsibility for the conduct of national affairs." (p. 31)

<sup>13</sup> Barro (1989) measures political instability by the number of revolutions, coups, and political assassinations per year. Londregan and Poole (1990) find that a successful coup raises the probability of another coup in the next six years. This result lends support to Finer (1962), who said that the "political culture" of a country deteriorates after a coup attempt.

drawn from the empirical income literature and the literature on culture and development. The following is a brief description of the economic variables used in the paper:

*Independent Economic Variables*

(a) Investment: Following Mankiw et al. (1992), I use lagged values of investment as a percentage of GDP to help explain differences in real per capita income across the different Latin American countries. I would expect the investment variable to be positively related to real per capita income.<sup>14</sup>

(b) Population Growth: I use lagged population growth to see if it can help to explain differences in real per capita income across countries. As found in Mankiw et al. (1992), I would expect this variable to be negatively related to per capita income levels.

(c) Human Capital: I use a lagged measure of average total years of schooling (ATS) to measure the level of human capital in a country. With data from Kyriacou (1991), I use lagged values of human capital to explain current real per capita income. Like physical capital, I would expect human capital to have a positive correlation with per capita income levels.

*Measuring the degree of Spanish colonization*

To measure the degree of Spanish colonization, I use a ranking developed by Palmer (1977) of 18 Latin American countries (Cuba is included in Palmer's ranking but is excluded here because of a lack of reliable economic data). Palmer constructs his ranking from the different variables listed in Appendix 3, which measure the degree of colonization a country experienced. For each of the twelve variables, he ranks the different countries by degree of Spanish colonization. Countries which have the lowest ranking (1 on a scale of 1 to 17) are those which had the most Spanish penetration. For example, countries which were colonized by the Spanish for the longest time will have lower rankings on average. Palmer averages a country's rankings over the twelve different variables to construct a comprehensive ranking of "Spanish penetration."

I construct dummy variables that sort the Latin American countries by degree of colonization. HSPAN is a dummy variable that represents the most heavily

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<sup>14</sup> Unlike Mankiw et. al, which averages over a 30 year period and accepts 1985 as an equilibrium value, I average the sample into 5 year periods with a total number of eight observations per country. This allows me to sample several potential "equilibrium" states.



colonized countries and LSPAN a variable for the least colonized countries. Countries are included in HSPAN if they have a Palmer ranking of 4.5 or less and are included in LSPAN if they have a ranking of 14 or more (see Appendix 2 for a list of the countries included in the paper, sorted by degree of colonization). In some regressions, I use the raw ranking, which I call SPAN, to lend further support to my findings.

***The effect of Spanish colonization on per-capita income levels in Latin America***

In the equations below, I test the null hypothesis that the degree of Spanish colonization does not have a significant impact on real per-capita income levels. Using variables from Mankiw et.al. (1992), I estimate a regression on per-capita income levels in Latin America for the years 1965-1990. To explain differences in per capita income levels, I use lagged investment rates, the average lagged level of schooling in the country, and population growth. Below are the results of the regression without any proxy for Spanish colonization.

$$\begin{aligned} \ln(\text{real per-capita income}) = & 6.9 - .16 \ln(\text{population}\%) + .38 \ln(\text{education}) \\ & (43.1) \quad (4.1) \qquad \qquad \qquad (4.5) \\ & \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad (1) \\ & + .22 \ln(\text{investment}) \\ & \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad (4.86) \end{aligned}$$

N=85; R2=.7660

Time dummies were excluded to save space

The results from eq. 1 above show all three of the independent variables to be significantly related to real per-capita income. Population growth, as expected, is negatively correlated with per capita income, while education and investment levels are both positively related to income. Equation 2 below shows the results of the regression when HSPAN and LSPAN are included in the estimation.

$$\begin{aligned} \ln(\text{real per-capita income}) = & 6.82 - .122 \ln(\text{Population}\%) + .333 \ln(\text{Education}) \\ & (49.8) \quad (3.33) \qquad \qquad \qquad (3.9) \\ & \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad (2) \\ & + .21 \ln(\text{Investment}) + .13 \text{HSPAN} + .24 \text{LSPAN} \\ & \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad (5.42) \qquad \qquad (1.55) \qquad \qquad (5.01) \end{aligned}$$

N=85; R2=.8602

Time dummies were excluded to save space

The results show a strong positive correlation between countries with a low degree of Spanish colonization and per-capita income levels, with the lesser colonized countries having a per capita income 248 dollars higher on average than moderately colonized countries. Countries with a high degree of colonization, on the other hand, do not perform significantly different than the moderate ones. The inclusion of the two dummy variables does not change the sign or significance of the other independent variables.

The next estimation is identical to eq.2, except that I have replaced the two dummy variables with SPAN, the raw ranking of countries by degree of colonization. I originally decided to use the dummy variables instead of the raw ranking, SPAN, because of the problems in interpreting results with a ranking variable (which would assume that the difference between a country ranked "1" and a country ranked "2" is the same as the difference between ones ranked "3" and "4", an extremely strong assumption). Equation 3 shows the results of the regression of SPAN on real per capita income levels.

$$\begin{aligned} \ln(\text{real per-capita income}) = & 6.76 - .13 \ln(\text{Population}\%) + .284 \ln(\text{Education}) \\ & (49.3) \quad (4.8) \quad (3.4) \\ & + .24 \ln(\text{Investment}) + .018 \text{SPAN} \\ & (6.5) \quad (3.6) \end{aligned} \tag{3}$$

N=85; R2=.9482

Time dummies were excluded to save space

The results of the above regression support the findings of equation 2. Lesser colonized countries have higher per capita income levels than their more colonized counterparts. Even with the inclusion of SPAN, I find that investment and education have positive and significant effects on income levels. Population growth is still negatively related to real per capita income. The findings in the equations 2 and 3 show that the degree of Spanish colonization has had a lasting effect on real per capita income levels in Latin America. Even when controlling for such factors as population growth, and the level of human and physical capital rates, I find a strong correlation between higher income levels and countries which has less Spanish colonization.

***Why do more heavily colonized countries have lower per capita incomes on average?***

This section investigates what political factors can explain the negative correlation between degree of colonization and average per capita income levels in Latin

America. It has often been hypothesized that Latin America inherited a culture prone to highly centralized, executive dominated government, a system of governance that is conducive to authoritarian regimes. To test whether the more heavily colonized colonies are also the ones that have had the most trouble with authoritarianism and political instability, I look at correlations between the variables measuring Spanish colonization and the different political variables discussed below.

*Political variables*

- i. authoritarian rule: This variable is the ratio of the number of years the executive was not elected to the number of years since independence (to 1966).<sup>15</sup>
- ii. lack of coups: This variable is the number of years since independence divided by the number of coups.<sup>16</sup>
- iii. importance of military: Average military expenditures as a percentage of total budget of selected years, 1865-1963.<sup>17</sup>
- iv. executive predominance: number of years with no legislature or ineffective legislature/number of years since independence.<sup>18</sup>
- v. military rule: Banks categories of military or military-civilian governments (number of years)/number of years since independence.<sup>19</sup>

***Results***

Table 1a shows the correlation matrix of SPAN and the political variables; Table 1b shows the matrix of the political variables and HSPAN and LSPAN. Both tables show significant support for the argument that the Spanish political legacy is one of instability, authoritarianism, and military dominated. The SPAN variable ranks the Latin American countries on a scale of 1 to 17, with one being the most heavily

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<sup>15</sup>from Arthur Banks, *Cross-Polity Time Series Data* (Cambridge: MIT Press, 1971), Segment 1, Field E.

<sup>16</sup> *Ibid.*

<sup>17</sup> *Ibid*, Segment 3, Field E.

<sup>18</sup> *Ibid*, Segment 1, Field O.

<sup>19</sup> *Ibid*, Segment 1, Field D.

colonized and 17 the least. Countries which were colonized the least by Spain also have had the least amount of coups, the most amount of elective rule, the least amount of executive predominance, and the least amount of military dominance. Table 2 presents the summary statistics for the 17 countries, divided into the HSPAN and LSPAN countries. From this table, one can see clearly that even though most of the economic variables are similar in magnitude (HSPAN countries actually have higher investment levels), the lesser colonized countries have significantly higher per capita income levels and lesser amounts of political instability (as measured by the political variables used in this paper).

Table 1b shows the correlations between HSPAN, LSPAN, and the political variables. The most striking differences between the two sets of countries are in the categories of military expenditures and military rule, and lack of coups. I find that HSPAN countries tend to spend more on average on their militaries (as a percentage of their national budget) and have had more years of military rule since independence. They have also had significantly more coups than the LSPAN countries.

I find, like other papers in the economics literature, that political culture can affect subsequent development. Table 3 shows the effect of including the political variables in the income equation. I add them in separately because of the high level of correlation between them. I find that all of the political variables, besides military rule, are significantly related to per capita income.<sup>20</sup> The lack of coups is positively related to real per capita GDP, while the remaining variables are all negatively correlated with the dependent variable. It is not surprising to find that political instability and military predominance has a negative subsequent effect on per capita income. What is interesting is the fact that Spanish political culture not only helps explain differences in per capita income levels in the Latin American region, it also helps to explain why some Latin American countries are more prone to coups and instability than others.<sup>21</sup>

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<sup>20</sup> The finding that mrule is not significantly related to per capita income is interesting. As has been noted in the literature, dictatorships can sometimes be conducive to economic growth, because of the economic stability that they can bring about. Democracy, on the other hand, can be extremely unstable and thus discourage investment and development.

<sup>21</sup> See Table 4 for a look at what happens to the SPAN variable when the different political variables are included in the income estimation. Not surprisingly, given the correlation between Spanishness and authoritarianism, I find that most of the variables knock out the significance of the SPAN ranking.

### ***Conclusion***

There is a debate in the economics and political science literature as to which factors matter for development and growth. While no one has conclusively proved that democracy promotes economic development, several authors have found a correlation between democracy (especially long established democracies) and political stability, a condition important for investment and growth. While the link between stability and growth is interesting, and is bolstered with theoretical and empirical support, not much work has been done on the question of why some countries develop stable political systems and why others seem incapable of doing so.

This paper has found that the Spanish legacy can help to explain why some countries in Latin America have been more prosperous and stable than others. I find that the countries that had the most exposure to Spain are also the ones that have had the most amount of development difficulties. They are also the ones that have troubles with coups, military predominance and rule, and political instability. If culture can be inherited, as has been argued by many in the development literature, and if Spanish political culture is prone to instability, then it is easy to see why the countries with the most Spanish exposure are also the ones with the most instability and the lowest per capita incomes on average.

**Table 1a**

Correlation matrix of the ranking of Spanish colonization (SPAN) and several political variables

Non-Elective Rule	-.16
Lack of coups	.41
Avg. Military Expenditures	-.43
Yrs. Military Rule	-.37
Executive Predominance	-.20
	SPAN

**Table 1b**

Correlation matrix of the Spanish dummies and political variables

Non-Elective Rule	-.0034	-.193
Lack of coups	-.335	.286
Avg. Military Expenditures	.33	-.42
Yrs. Military Rule	.367	-.193
Executive Predominance	.072	-.05
	HSPAN	LSPAN

**Table 1c**

Correlation matrix of the political variables

Non-Elective Rule		1.0		
Lack of coups	-.60	1.0		
Avg. Military Expenditures	.696	-.87	1.0	
Yrs. Military Rule	.21	-.46	.48	1.0
Executive Predominance	.78	-.75	.65	.16
	nerule	coups	mexp	mrule
			mexp	

**Table 2**  
Summary Statistics, by degree of Spanishness  
Median /standard deviation

Variable	Hspan countries	Lspan countries
initial per-capita income	2565 / 1318	3309 / 1960
investment	16.6 / 4.8	14.2 / 4.1
population %	2.6 / .4	2.8 / 1
literacy	4.25 / 1.5	5.9 / 1.4
non-elective rule	17.8 / 8.31	11.6 / 12.1
lack of coups	7 / 5.1	18.3 / 5.7
military expenditures	21.3 / 4.3	12.6 / 5.5
military rule	11.7 / 12.2	7.1 / 5.3
exec. Predominance	44.4 / 11.3	35.9 / 26.5

**Table 3**

Pooled cross sectional regressions on per capita income levels in 17 Latin American countries, including measures of authoritarianism and political instability

Variable	Eq.1	Eq. 2	Eq.3	Eq. 4	Eq. 5
constant	7 (46)	6.4 (48)	7.3 (39)	7.2 (49)	7.2 (37)
lhk	.34 (4.5)	.32 (4.3)	.35 (4.3)	.3 (4.2)	.29 (2.7)
lpop	-.15 (4.5)	-.06 (1.9)	-.13 (3.2)	-.12 (4.5)	-.19 (4.6)
linv	.23 (6.3)	.25 (6.3)	.23 (5.7)	.23 (6.7)	.19 (4.4)
nerule	-.01 (5.3)	*	*	*	*
lack of coups	.03 (5.8)	*	*	*	*
mexp	*	*	-.02 (3.6)	-.008 (5.7)	*
mrul	*	*	*	*	-.004 (.87)
N <sub>2</sub>	85	85	85	85	85
R <sup>2</sup>	.9145	.8382	.8533	.9437	.7989



**Table 4**

Pooled cross sectional regressions on per capita income levels in 17 Latin American countries, including measures of authoritarianism, political instability, and SPAN

Variable	Eq. 1a	Eq. 2a	Eq. 3a	Eq. 4a	Eq. 5a
constant	7 (42)	6.4 (52)	7.4 (36)	7.2 (43)	6.9 (34)
lhc	.27 (3.2)	.33 (4.3)	.3 (3.6)	.26 (3.2)	.24 (2.7)
lpop	-.13 (3.9)	-.07 (2.6)	-.1 (3.4)	-.1 (4.6)	-.13 (3.6)
lin	.22 (5.4)	.25 (6.5)	.22 (5.5)	.22 (5.7)	.22 (5.7)
span	.01 (1.7)	-.004 (.65)	.0006 (.08)	.005 (.75)	.02 (3.2)
nerule	-.01 (3.5)	*	*	*	*
lack of coups	*	.03 (5.3)	*	*	*
mexp	*	*	-.03 (3.6)	*	*
exec	*	-.008 (4.4)	*	*	*
mrule	*	*	.0003 (.08)	*	*
N <sub>i</sub>	85	85	85	85	85
R <sup>2</sup>	.8242	.8635	.8489	.8575	.9430

## **Appendix 1**

A ranking of Latin American countries by "Spanish colonial penetration," where lower numbers represent a higher degree of Spanish colonization<sup>ab</sup>

Argentina	13
Bolivia	4.5
Chile	12
Colombia	4.5
Costa Rica	16
Cuba	7
Dominican Rep.	6
Ecuador	9
El Salvador	8
Guatemala	3
Honduras	11
Mexico	1
Nicaragua	14
Panama	10
Paraguay	17
Peru	2
Uruguay	18
Venezuela	15

a) ranking taken from Palmer (1977)

b) Cuba is included in the Palmer (1977) ranking but is excluded from the paper because of the difficulty in finding reliable economic data on Cuba's post-WWII development. As Cuba is ranked in the moderate level of colonization category, its exclusion should not affect my findings.

## Appendix 2

Countries in the sample, by degree of Spanish colonization

*Countries which had a high degree of Spanish colonization (5):*  
defined as countries with a Palmer ranking of 4.5 or lower

Bolivia	Mexico
Colombia	Peru
Guatemala	

*Countries which had a moderate degree of Spanish colonization (7):*  
defined as countries with a Palmer ranking between 4.5 and 14

Argentina	Ecuador
Chile	Honduras
Dominican Rep.	Panama
El Salvador	

*Countries which had a low degree of Spanish colonization (5):*  
defined as countries with a Palmer ranking above or equal to 14

Costa Rica	Uruguay
Nicaragua	Venezuela
Paraguay	

### Appendix 3

Variables used in the construction of the above ranking (see Palmer (1977) for a complete description of the variables and their sources):

1. *stages of effective occupation*: a ranking of countries by their date of Spanish occupation, which proxies the length of Spanish colonization.
2. *founding of capital cities*: as Palmer states, "the longer the city had been established, the longer it was in a position to dominate the surrounding countryside." Thus, countries which had the earliest capital cities established by the Spanish would also have the highest degree of colonial penetration.
3. *type of administrative center*: this variable accounts for the different types of rule the Spanish established in the New World. Viceroyalties were given to the most important regions, while captaincies-general presidencies and provincial governors signified a less strategic area to Spain.
4. *date the administrative center was established*: similar to the above variables, this variable proxies the length of Spanish rule over the different colonies in the New World.
5. *date audiencias were established*: this variable serves as a proxy for the length of time Spain had a functioning judicial system in the various colonies.
6. *the audiencia budgets and salaries*: the budget and salaries allocated to the different regional judicial systems gives us a good idea of how important Spain ranked her colonies. Measured in pesos, 1788.
7. *bullion production*: countries with the highest gold production would be of obvious importance to Spain and would probably face tighter control and colonization from the Spanish. Measured in thousands of pesos, 1800.
8. *church bishopric revenues*: a proxy of the strength of the Catholic Church and its degree of penetration in the different colonies, in thousands of pesos, 1800.
9. *major city population*: the more important a particular region was to Spain, the more likely it is that the capital city attracted many Spanish to it. (by thousands of people, 1800)
10. *total population*: the larger the population in a colony, the more administrative "concern and control" would be afforded to it (by thousands of people, 1800).
11. *population density*: a proxy for the degree of Spanish occupation in the different colonies in 1800.
12. *total trade (excluding precious metals)*: while bullion was important to Spain, so was trade in other goods. The more commercial activity in a region, the more likely it is that Spain considered it to be an important area. Measured in thousands of pesos, 1800.

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