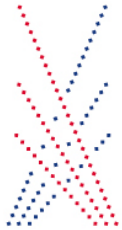

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International arbitration and economic growth in Latin America

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1. INTRODUCTION

Property rights determine the rules for the allocation and distribution of wealth. By definition, property rights are impartial rules that describe what can or cannot be done with the resources that either people or corporations own. On the other hand, contract rights establish the obligations and rights among individuals (Cooter and Ulen, 2012).

In general, one can argue that the bargaining power among individuals is bounded by rules and regulations. As rules and regulations become more complex, the agency and transaction costs among individuals also increase. Therefore, for rational private agents who are engaged in a contractual dispute, it is in their best interests to reach a consensus or an agreement among themselves rather than involving an external party to mediate in the conflict. Thus, the involvement of a court of law in the resolution of contractual conflicts is only desirable when private agents fail to reach a consensus (Posner, 2011, Cooter and Ulen, 2012).

Consequently, the solution proposed by the Coase Theorem led us to conclude that private cooperation among individuals is more efficient than solutions provided by the judicial system in contractual disputes. Therefore, private cooperation is a mechanism that is more efficient in the reallocation of resources among conflicting parties than the mechanism provided by a court of law. In this context, arbitrage can be defined as a private "cooperation" mechanism that can reduce transaction and agency costs among conflicting parties while generating economic value by efficiently allocating resources (Posner, 2011, Cooter and Ulen, 2012). On the other hand, international arbitrage is a supranational negotiation mechanism between international agents. International arbitrage is important because it helps to foster market efficiency by creating a resolution mechanism that is not restricted to a local jurisdiction. In practice, international

arbitration is one of the mechanisms that is more heavily employed in the resolution of international contractual conflicts.

According to Posner (2011), there is an ongoing concern about the capacity of emerging countries to provide a basic legal structure for the resolution of contractual conflicts, which is the basis of a free market economy. Thus, international arbitrage is an alternative solution to this conundrum. International arbitration acts as a private substitute for national legal structures that fail to protect contractual and property rights(Posner, 2011).

Arbitrageurs take precedence as an alternative to judges when solving contractual disputes, since they are experts who are selected by the opposing parties, and their decisions help to reduce the ambiguity of the decisions taken by common or civil law judges or juries. The benefits of arbitrage are that it gives privacy to the conflicting parties and that the disputes are solved on the basis of commercial interests rather than in terms of a particular national jurisdiction (Posner, 2011).

In neoclassic economics, it is common to explore the relation between foreign direct investment (FDI) and economic growth. The argument relies on the fact that FDI fosters economic growth through the transfer of technology and capital that helps to improve the production capacity of the recipient party. To foster FDI, it is imperative that there is an adequate commercial regime, a solid legal framework, and political stability. However, there is empirical evidence that FDI can have negative effects or no effect at all on economic growth in emerging countries (Parviz, 2016).

Additionally, most of the literature on economic development tends to concentrate on the causes of market failures and on the means of correcting such failures. Yet, little attention has been paid to the lack of effective institutions—as is the case in emerging economies such as those in Latin America—, as these ineffective institutions are the primary reason behind the lack of a strong legal framework that is the basis for a functioning market economy (Posner, 1998). A strong legal framework is paramount in the protection and regulation of property rights. There is also very little research on those economies that have poor property and contractual systems but that, at the same time, exhibit positive economic growth. Perhaps one explanation for this type of phenomenon is that international arbitration is employed as a substitute for local courts in contractual disputes. International arbitration has the benefit of generating a positive reputational effect in those countries that abide by the arbitration decision. Even if the disputing party does not agree with the decision, it abides by the ruling to prevent commercial ostracism by other countries (Posner, 1998).

In terms of international trade, this, in itself, becomes a more powerful incentive than local decisions by local courts. One can even argue that market participants prefer international arbitration as a mechanism through which to solve disputes as opposed to the rigidity of national or multilateral organisms (Casella, 1996).

The purpose of this paper is to explore the impact of international arbitration on economic growth in Latin America. By using panel data on selected Latin American countries that are affiliated with the International Centre for Settlement of Investment Disputes (ICSID) and economic variables commonly used in the literature on economic growth, we hope to empirically determine if international arbitration does indeed have an impact on economic growth. The remainder of this paper is structured as follows: In Section 2, we describe the data and the model employed. In Section 3, we discuss the results obtained from the model, and finally, in Section 4, we conclude.

2. DATA AND MODEL

Our data consists of a dataset of eight Latin American countries that have open international arbitrage processes between the period under consideration (1996 to 2015). The economic data is reported by the World Bank and the International Monetary Fund (IMF) via the Bloomberg platform at the end of each year in the sample. The variables in question are GDP growth, which is defined as the percentage change in GDP in US dollars from year to year, GDP, which is the gross domestic product in US dollars, FDI, which is reported as the percentage of FDI in terms of GDP, STOCK, which is the stock market capitalization of each country in the sample at the end of each year, FISCAL BALANCE, which is the deficit or surplus reported by the government for each country in the sample at the end of the year, CURRENT ACCOUNT/GDP, which is the deficit or surplus of the current account at the end of each year, CPI, which is the log-transformed consumer price index of each country, GINI, which is the Gini coefficient reported for each country at the end of the year, and GDP PER CAPITA, which is the GDP divided by the population of each country at the end of the year. The number of arbitrage processes and the average duration of the processes were taken from the ICSID, which was established by the World Bank in 1996 in order to settle investment disputes among member countries in matters of international investment disputes by providing an independent conciliation commission or arbitral tribunal (Worldbank, 2017). All the descriptive statistics of the data can be seen in Table 1.

(Table 1 about here)

To measure the effects of arbitration on GDP growth we used the following panel regression specification:

$$GDPGROWTH_{i,t} = \alpha_o + \beta_{i,t-1} X_{i,t-1} + \lambda_1 D_{number,t-1} + \lambda_2 D_{duration,t-1} + v_{i,t} \quad (1)$$

Where $X_{i,t-1}$= is the set of control variables mentioned in the previous paragraph, $D_{number, t-1}$= is the number of arbitration processes against a specific country in a previous year, $D_{duration, t-1}$= is the average duration of the arbitration processes for a specific country in a previous year. Finally, $v_{i,t}$ = is a term to control for country effects. Both, the base regression and the country effects' specification are estimated with robust standard errors. In all cases, we use lagged variables in order to control for endogeneity among the explanatory and independent variables.

3. RESULTS

In Table 2, for the base regression case, we can observe that the only two control variables that are significant are GDP and the size of the stock market, and that the number of arbitration processes and the average duration of those processes have a positive effect on GDP growth. When we control for country effects, we can observe that the control variables that are significant are GDP, the current account deficit, CPI, and the Gini coefficient. Additionally, when we control for country effects, the number of arbitration processes is not as important as the average duration of an arbitration process in a country.

(Table 2 about here)

From the control variables, we can observe that the previous year's GDP is significant with a negative sign, even when we control for country effects, and this can be interpreted as there being an inverse relationship between growth and the GDP in the previous year. For the countries in the sample, this means that if the GDP for the previous year was high, the expected growth in the next year would probably be low. In the base regression, the size of the stock market is significant with the expected sign, and when we control for country differences, the effect disappears. When we control for country differences, the current account as a percentage of GDP is highly significant with a positive sign, which means that the expected theoretical relationship will hold (a larger

current account surplus/deficit would have a positive/negative effect on GDP growth). Interestingly, when we account for country differences, we can observe that the CPI and the Gini coefficient act as predictors of GDP growth with the expected theoretical negative sign, which means that higher inflation and larger symptoms of income inequality would have an inverse relationship with GDP growth. Finally, when we control for country effects, the average duration of an arbitrage process has a positive effect on GDP growth. Although this is slightly counterintuitive, a possible explanation could be that longer arbitration processes occur in Latin American countries with stronger institutions than in other Latin American countries with weaker institutions. In the case of this specific sample, our results are also in line with other studies that report that FDI does not generate growth (Grilli and Milesi-Ferretti, 1995, Smarzynska Javorcik, 2004). The positive effect of the rule of institutions, bilateral treaties, and legal frameworks on economic growth have previously been addressed in the literature , and by addressing the positive effects of international commercial arbitration on GDP growth, we add more evidence in support of these findings.

4. FINAL REMARKS

By using a panel estimation, the present study analyzed the effects of international arbitration on economic growth. After controlling for common determinants for growth and by using a robust specification to avoid endogeneity problems, we found that for the Latin American countries in the sample, international arbitration has a positive effect on economic growth. Interestingly, the control variables that have more impact on economic growth in our sample are lagged GDP, CA/GDP, CPI, and the GINI coefficient as a proxy for income inequality, and that lagged FDI did not have a significant impact on GDP growth in our sample.

Table 1-Descriptive statistics

	GDP GROWTH	GDP	FDI	STOCK	FISCAL BALANCE
Mean	3,66	271630,70	4,71	18883,23	-0,99
Median	4,07	121863,50	3,63	3065,93	-1,11
Maximum	11,98	1298399,00	16,23	163691,90	7,93
Minimum	-10,89	7905,49	-2,50	0,94	-8,90
Std. Dev.	3,94	339091,70	3,24	33464,36	2,64
Skewness	-0,94	1,59	0,96	2,27	0,30
Kurtosis	4,90	4,47	3,72	7,74	4,81
Observations	106	106	106	106	106

	CURRENT ACCOUNT/GDP	CPI	GINI	GDP PER CAPITA	NUMBER OF ARBITRAGE PROCESSES	AVERAGE DURATION OF PROCESSES
Mean	-0,01	3,59	51,02	6376,41	1,25	3,47
Median	-0,02	3,53	50,95	5952,95	0,50	3,08
Maximum	0,12	4,32	63,00	15764,76	20,00	7,03
Minimum	-0,14	3,00	42,28	913,58	0,00	1,06
Std. Dev.	0,05	0,35	4,23	3852,29	2,50	1,53
Skewness	0,22	0,96	0,17	0,48	4,85	0,56
Kurtosis	3,99	3,05	2,85	2,41	33,38	2,52
Observations	106	106	106	106	106	106

This table contains all the data for the countries in the sample (Argentina, Bolivia, Chile, Ecuador, Mexico, Panama, Peru, and Venezuela) for the years 1996 to 2015. GDP growth is expressed in percentage terms, GDP is in millions of US dollars, FDI is expressed as a percentage of GDP, STOCK is in millions of USD, FISCAL BALANCE is expressed as a percentage, CURRENT ACCOUNT/GDP is expressed as the percentage deficit/surplus of the current account over GDP, CPI is the log-transformed consumer price index of each country at each year end, GINI is the Gini coefficient reported for each country at the end of each year, GDP per capita is expressed in thousands of USD, and the number of arbitrage processes and average duration of the processes are taken from the ICSID website for each year in the sample.

Table 2-Results

Dependent variable GDP/GROWTH	**BASE**	**COUNTRY EFFECTS**
Control variables		
GDP_{t-1}	-3,4645***	-6,3936***
	(1,0421)	(1,7988)
FDI_{t-1}	1,2598	1,0518
	(0,8018)	(0,7290)
$STOCK_{t-1}$	0,7167*	0,3333
	(0,4053)	(0,4124)
$FISCAL\ BALANCE_{t-1}$	0,2164	-0,0254
	(0,1850)	(0,1703)
CA/GDP_{t-1}	11,6816	35,4892***
	(10,3973)	(10,8239)
CPI_{t-1}	-2,1515	-10,3173***
	(1,7510)	(3,7821)
$GINI_{t-1}$	-0,6685	-27,0428***
	(7,8936)	(9,4237)
$GDP\ PER\ CAPITA_{t-1}$	-0,3967	0,8917
	(2,7059)	(2,3327)
Legal environment		
$ARBITRAGE\ PROCESSES_{t-1}$	0,3302**	0,1866
	(0,1531)	(0,1425)

AVERAGE DURATION$_{t-1}$	0,9719***	0,6596*
	(0,3279)	(0,3513)
Adjusted R^2	0,3297	0,5963
Number of observations	102	102
Year Effects	NO	NO
Country effects	NO	YES

This table contains the results of the base regression**,** $GDPGROWTH_{i,t} = \alpha_o + \beta_{i,t-1}X_{i,t-1} + \lambda_1 D_{number,t-1} + \lambda_2 D_{duration,t-1} + v_{i,t}$ **,**where $X_{i,t-1}$= is the set of control variables mentioned in the previous paragraph, $D_{number, t-1}$= is the number of arbitration processes against a specific country in a previous year, and $D_{duration, t-1}$= is the average duration of the arbitration processes for a specific country in the previous year. Finally, $v_{i,t}$ = is the control term for country effects.

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