



# The Role of Corruption Levels on Voters' Turnout: The Case Study of Colombian, Ecuadorian and Venezuelan Cities.

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## INTRODUCTION

The 2020 Transparency International Report classified once again Latin America as one of the regions with higher levels of corruption. In Latin American countries, it appears to exist as endemic or systematic corruption, with exception of Uruguay and Chile. Before going further, there are different types of corruption that we need to previously distinguish. On the one, corruption can be considered as petty or grand. The first refers to a smaller scale kind of corruption that takes place at the implementation end of public services when public officials meet civilians. On the other hand, **grand corruption** occurs at the highest levels of government in a way that requires significant subversion of the political, legal and economic dynamics. When considering the latter as the illegal diversion of political funds or abuse of power for private gains, it is proved it can weaken democratic institutions, trust in official or governmental employees as well as the legitimacy of state or local administrations.

In Colombia, corruption is linked to a loss of 4% in GDP which is equivalent to more or less three billion USD between 1991 and 2011 (Universidad del Externado de Colombia, 2018). In 2018, an anti-corruption popular consultation was held in the country, inviting the 36 million voters to advocate for seven anti-corruption laws whose main objectives were: limit the period for re-elections, diminish the wages of high government employees, and increase transparency in the accounting of the Senate and Congress. Nevertheless, only a third of the voters participated, showing the limited political participation and civic engagement of Colombian citizens. Moreover, during the last decades Venezuela saw an increase in its corruption levels followed by the increase in authoritarian political practices, insecurity levels, decrease in the quality of the educational and health systems and deep loss of trust on government institutions. The effects of this on political participation is not necessarily clear since they can be some mixed effect. However, lower opposition to the government's party can be encouraged in fears of facing political persecution or losing government's social assistance and support. Thus, with our study we aim to determine on what extends the corruption levels in a subnational scale can hinder civic engagement and voters' turnout. We decided to focus on the main cities of Colombia and

extended our research to cities in neighbouring countries such as Ecuador and Venezuela that are close to the Colombian border. To account for corruption we will consider the public perception on grand corruption and its diffusion across cities through social exchanges and trade; these being the characteristics of economic corruption (Goel et.al., 2014). However, to explain political participation the computed economic corruption will act as a proxy of the political corruption which tends to have a narrower geographical extension and slower diffusion. We assume this is possible since in Latin American countries such as Colombia, Ecuador and Venezuela the political power seems highly correlated to the economic power of certain social groups (elites).

This study is structured as follows. First, we'll present a summary on the relevant literature review Secondly, we'll introduce our hypothesis, then data and variable chosen. Thirdly we'll explain our empirical strategy plus some descriptive statistics. Finally, we'll furnish our results and conclude

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## LITERATURE REVIEW

The reflection on the political corruption and its respective electoral behaviours finds its origin in the United States at the end of the XX<sup>th</sup> century. The causality interaction between the political corruption and the trust put on the government (or public administrations) was studied particularly by Donatella Della Porta, an Italian sociologist and political scientist. For her, political corruption weakens the efficacy and efficiency of public administrations when producing & managing common goods, answering to social demands and creating social welfare (Della Porta, 1999). Considering the Italian case study, Della Porta proves that in fact the trust on the public administrations decreases with an increase of media coverage of corruption scandals. In his study Giommoni (2021), notes that Italian municipalities that are sensitive to the region's capital corruption scandals have lesser levels of political participation which effect tends to be more significant in the short-run. H.P.P. Donfouet et. Al. (2014) proposed in their paper "*Analysing Spatial Spillovers in Corruption: A Dynamic Spatial Panel Data Approach*", a theoretical model that includes for the first time the possible corruption's

spatial effects and spatial correlations. For them, the corruption levels of a given country can be the product of neighbouring countries' respective corruption levels. It can be easily accepted in a sociological point of view that actions generally considered as "wicked" can be "contagious" in a spatial point of view (Pinto et. Al., 2008). In certain developing countries, governments seem less prompt to have anti-corruption practices, encouraging then bribes and illegal transfer of funds between neighbouring countries where corruption laws and regulations are laxer. They concluded that to fight against corruption, constraining rules should be enhanced at subnational and international levels, followed by a reinforcement of the application of laws and sanctions. This is also verified by Borsky et.al. (2019). They underline simultaneously the importance to consider subnational regions' own characteristics and spatial interdependencies when aiming to implement efficient anti-corruption policies at the local level. At the same time, they found that corruption levels differ within countries and they are positively correlated with neighbouring subnational regions' corruption levels. Moreover, in particular high income regions with lower corruption levels tend to spill in space due to a high degree of connectivity in terms of economic, socio-cultural and political exchanges with other subnational regions.

Following this logic, integrate the spatial interdependence in the study of the determinants of corruption and the indirect effect on voters' turnout seems key for political policy assessment in democratic countries. Although currently Venezuela is considered by the Economist Intelligence Unit as an authoritarian regime, we include it in our study in aims to evaluate the impacts of corruption and civic engagement in a country with a polemical political situation as well as its possible spillover effects to the corruption levels and political participation in Colombia.

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## HYPOTHESIS

Considering the papers mentioned in the previous section and in aims to study the impact of the local corruption level on the political participation of the citizens in our sample, we base our study on the following hypothesis.

On the one hand, the subnational corruption levels can be determined as national corruption levels. Given their economic development level, structure of their economy, political stability, level of international integration, democratic tradition, geographic position and ethnic fractionalization, we can have an idea of the possible level of corruption that can take place inside the studied community. Thus, to estimate our corruption index we assume that there are a set of environmental, institutional, economic and spatial characteristics that will play a key role in the increase or decrease of local corruption levels. On the environmental side, we believe that the more a city has economic activities linked to the extraction of natural resources, the higher will be the corruption level of the city since these activities tend to enhance rent-seeking behaviours (Mody & Murshid, 2005). On the economic and development point of view, with higher income level per capita and higher population density, people will feel discouraged to commit corruptive activities whether because of there is no financial need or due to peer pressure and easy exposure to the public eye (Borsky et.al., 2019). At the same time, when subnational territories present higher ethnic fracture there could be less social cohesion which allows corruption to develop. Finally, for the estimation of the corruption index we decided to include the possible effects of spatial correlations and spatial spillover effects. Here, we considered that the corruption level of a city or community can be influenced by its global exchanges (migration and trade) with other cities. We assume that with more important migration inflows, trade openness and lower transportation costs (proxied by the distance between cities), corruption levels will tend to decrease (Borsky et.al, 2019) since cities will need to remain attractive and competitive in the eyes of their neighbours, political or commercial partners.

On the other hand, the main objective of our study is to determine what extends the corruption level hinders local voters' turnout and thus political participation in Colombia and border cities in Ecuador and Venezuela. We assume that with a higher average level of education, citizens will have a higher civic engagement towards their local government elections. At the same time, we believe that a higher exposure to media and its respective coverage of corruption scandals can incentivise voter's turnout mainly if the go to source of information are ICTs.

## EMPIRICAL METHODOLOGY

## DATA AND VARIABLES

Tab. 1. Explained variables

Variable	Methodology	Unit of Analysis	Source
Corruption Index	Merge of four variables indicating the perception of local corruption into a weighted categorical variable	Score from 0 to 1. 1 Being a high level of corruption.	Latinobarometro, 2018
Political Participation	Number of effective voters / Total Possible Voters	Percentage If the latter equals 1 there was a voters' turnout of 100%.	Latinobarometro, 2018

Tab.2. Explanatory and Control Variables

Variable	Methodology	Unit of Analysis	Source
<b>Corruption's Equation</b>			
<b>Economic and Development Characteristics</b>			
GDP		Per Capita USD	Global Data Lab (Venezuela, 2018); Banco Central de Ecuador (2018); DANE (2018)
Population Density	Total city population/ Land Area	Persons by km <sup>2</sup>	INEC (Ecuador, 2010); INEC (Venezuela, 2011); DANE (Colombia, 2021)
Degree of Trade Openness	Dummy Variable: 1 if city near the borders or with access to seaports else 0		
Capital City	Dummy Variable: 1 if National Capital else 0		
<b>Environmental Characteristics</b>			
Natural Capital	Total value of mining royalties by department, state or province in 2018. The included minerals are: gold, silver, platinum, iron, copper, clay, nickel, gravel and coal)	USD	Agencia Nacional de Minería, 2021; Agencia de Regulacion y Control Minero Ecuador, 2018; Ministerio del Poder Popular para Desarrollo Minero (Venezuela, 2017)
<b>Social Characteristics</b>			
Ethnic Fractionalization	Percentage of the population represented by "minorities" (natives, afro-descendants, mulatos and mestizos)	% of the department, province or state's population	DANE (Colombia), 2018; INEC (Ecuador), 2010; INE(Venezuela), 2011
<b>Spatial Characteristics</b>			

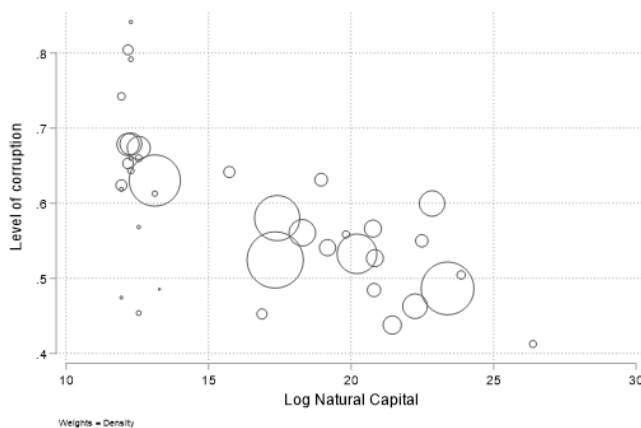


Migration Balance	Persons living in the same department, states or province they were born	% of the department, province or state's population	DANE, 2018; INEC (ECUADOR), 2010; INE (Venezuela), 2001
Geographical Distance	Distance between cities		
Coordinates	Latitude and Longitude		Google Earth
<b>Political Participation's Equation</b>			
Civic Engagement	Aggregated score by city of the type of source of information consulted for political matters	Score between 0-1. Closer to 0 access of information via traditional sources and closer to 1 access to information mainly via ICTs	Latinobarometro, 2018
<b>Social Characteristics</b>			
Education	Average Education Level	Years of education	Latinobarometro, 2018

For our study, our main data source was the Latinobarometro 2018 database which is a household level survey. To be able to do our city-level analysis, we collapsed and aggregated individual responses of this survey depending if we needed an average value or a score. To complete our data, we extracted information on population, national accounts and mining royalties in their respective country's national statistical institution or central bank. Nevertheless, these data were in some cases only available at a departmental, provincial or federative state level, and therefore we generalized them for the cities belonging to the respective subnational entities (e.g. migration balance, ethnical fractionalization, natural capital, GDP). We faced however a particular problem with data from Venezuela, due to access restrictions. For the mining royalties we had to extrapolate those received with gold, iron and coal production at a national level, and weight it given each state's GDP per capita. The latter was as well adapted for each city. Due to absence of data of GDP at a city level and GDP at a federative state level, we attributed at each city belonging to a given state the found GDP per capita at the federative state level. At the end, we have city-level data with a total of 38 observations (if we did the study at a higher aggregated level we wouldn't have enough observations). The geographical distance variable is the one that will represent the "spatial flavour" in our models. It is computed as the direct linear distance between cities and will serve as a proxy for trade's transaction costs.

## DESCRIPTIVE STATISTICS

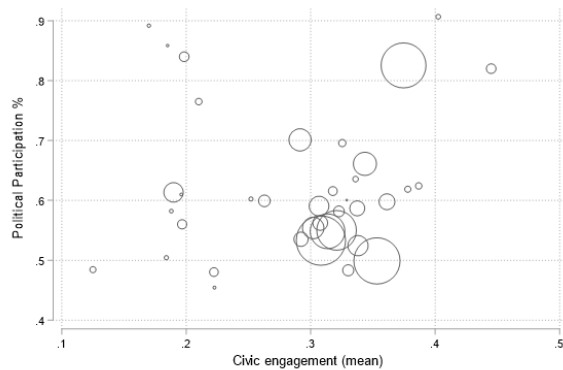
**Figure.1 The Level Corruption and the Role of Natural Resources**



In this graph, we determined the relationship between the log of the mining royalties (here Natural Capital) and the index of corruption of a given city  $i$ . We observe there seems to be a slight downward tendency between the perceived mining royalties and the level of corruption. Thus, the higher are the revenues of natural resources' extraction perceived by a given city, the lower the index of corruption of the respective city. This seems to be the particular case of cities with medium and high population density levels. However, the relationship between mining royalties (natural resources extraction) and index of corruption is not clear when we focus on the cities with the lowest population densities. In the interval  $]10;15[$ , we have cities with low mining

royalties and low levels of corruption, but at the same time cities with low mining royalties and higher levels of corruption. These suggest that in our sample, the greater is the population density of a city the clearer is the downward relationship between mining royalties and the index of corruption. Population density may be then considered as a determinant of transparency and of the winning effect between natural resources' extraction and levels of corruption.

**Figure 2. The Role of Civic Engagement on the Political Participation**



It appears to be an upward relationship between our variable civic engagement and the final voters' turnout (political participation). In general, and given the construction of our civic engagement variable, we can conclude that the citizens of our sample resort principally to traditional media sources such as friends, family, radio and newspapers. Moreover, the more citizens have access to information about political matters thanks to ICTs, the higher the political participation tends to be. This makes sense since Social Media allows a quicker and more massive diffusion of news and information. At the same time, it seems that the lower the population density of a city the more often citizens resort to traditional broadcast channels. However, the impact of the latter on political participation on those cities it's not 100% clear as we have some outliers at the top left of the graphic.

### SPATIAL AUTOCORRELATION

We created our inverse distance weighted matrix and ran the spatial diagnostic command on Stata. Neither of the tests (Moran's I, Lagrange Multiplier or Robust Lagrange Multiplier) had a p-values < 0.05 or 0.1. Therefore, we concluded that the data

analysed with the OLS model for the corruption index doesn't exhibit spatial correlations or dependencies. Thus, there is no need for a spatial model. We decided then that a spatial representation of the subject wouldn't enrich our discussion. We had as well problems when trying to comparing the levels of corruption or political participation in a city-level shapefile, since there was none file available that only represented Colombia, Venezuela and Ecuador.

**Figure 3. Spatial Diagnostic**

Fitted model			
corrup = Minority + Migration + lg_Nat_cap + lg_GDP_cap + Density + cap_c + d_t_open			
Weights matrix			
Name: W			
Type: Distance-based (inverse distance)			
Distance band: 0.0 < d <= 10.0			
Row-standardized: Yes			
Diagnostics			
Test	Statistic	df	p-value
Spatial error:			
Moran's I	-0.751	1	1.547
Lagrange multiplier	1.660	1	0.198
Robust Lagrange multiplier	2.138	1	0.144
Spatial lag:			
Lagrange multiplier	0.382	1	0.537
Robust Lagrange multiplier	0.860	1	0.354

### ECONOMETRIC MODEL

Since we found that for our sample there is not spatial autocorrelation, we decided then to implement a basic Two Stage Least Squares Model (2SLS). The instrumented variable will be the corruption index and the main explained variable the political participation (voters' turnout). We have then the following equations:

#### CORRUPTION EQUATION

$$\widehat{Corruption}_i = \alpha + \sum_{k=0}^K \beta_k X + \varepsilon \quad (1)$$

Here, X represents the matrix of our explanatory variables (Natural Capital, GDP per Capita, Population Density, Degree of Openness, Capital City, Migration and Ethnical Fracture),  $\alpha$  the intercept and  $\varepsilon$  the error term. To have a better fitted model we use the log of GDP per capita and Natural Capital.

#### POLITICAL PARTICIPATION EQUATION

$$PolPart_i = \gamma + \varphi_1 Educ_i + \varphi_2 CivicEngagement_i + \varphi_3 Corruption_3 + \mu \quad (2)$$

Equation 2 represents the instrumented 2SLS equation for the estimation of the political participation or voter's turnout in the studied cities. Here, Educ represents the average year of education for the city  $i$ , CivicEngagement the index of ICT consultation for information on political matters, PolPart the estimated voters' turnout of city  $i$  and  $\mu$  the error term. When comparing to an OLS model, the corruption index will no longer be the estimated results obtained in equation (1). To have a model closer to reality and enrich the basic OLS model we will need to add as well the Migration and Minorities variables. This is because, when doing the 2SLS we assumed that the impact of these variables on political participation had place through an indirect mechanism linked to the corruption level. However, in order to have an idea of their significance on political participation in the OLS model, we have to consider their direct effects on the latter. The results are presented in Table 5.

## RESULTS

In light of our earlier discussion of possible spatial dependence with respect to corruption and indirectly to political participation or voter's turnout in the studied cities, there's not significant evidence to confirm that. In this sense, we employ an OLS regression to explain corruption with a set of explanatory and control variables. The results obtained suggest a negative and statistically significant relationship between the logarithm of natural capital and corruption. This reflects that an increase of one percent of mining royalties in a city's leads to a decrease in local corruption levels. The increase in natural capital (Mining Royalties) implies an increase in the revenues received by the city for the exploitation of natural resources, which would translate in the short term into an increase in the city's income level and in the long term into an increase in development. More prosperous cities or nations are also likely to have stronger checks and balances against illegal activities such as grand corruption.

It is plausible, however, that the corruption index is endogenous, therefore we instrumented political participation with the corruption estimation, civic engagement and education

(Equation (2)) using Two-Step Least Square (2SLS). The resulting coefficients of this regression's instruments are not statistically significant. This is why we finally used an OLS regression to estimate the equation in (2) by including the corruption index, minority and migration variable. The results suggest that the coefficients of civic engagement, migration and Minority are statistically significant.

Regarding the percentage of the population represented by "minorities" (natives, afro-descendants, mulatos and mestizos), the coefficient of Minority is positive and significant, suggesting that a higher percentage of the minorities population increases political participation levels by 39 percentage points. The fact that the size of these ethnic groups increases, implies that democracies must develop tools that recognize their citizenship rights and discourage their marginalization within the democratic system. At the same time, it can reflect the fact that due to lack of proper representation in the current local government, they feel the need to actively exercise their right to vote.

Considering the civic engagement variable, the results show a positive relationship with political participation. This means that as more citizens have access to information about political matters thanks to ICTs, political participation tends to increase as well. In that sense, online ICT activities increase "offline" engagement in local politics: when people become informed and communicate with other citizens or politicians via the Net, they will be disposed to engage in other types of local political activities as well.

Furthermore, a negative and significant relationship between migration and political participation is observed. In this sense, political participation depends significantly and negatively on the percentage of people born in the city who still live there. This is why an increase in the number of local people who migrate translates into a decrease in political participation. If the part of local people diminishes then in the absence of a variation on the amount of immigrants, the part of the latter will increase automatically generating a loss on the feeling of belonging and therefore a possible loss on political participation. In this case, the cultural, linguistic and social diversity of a community can affect the mechanisms of political identification. Likewise, if the migrant community is unable to vote in the host city, aggregate levels of participation in local elections will tend to decrease.

Nonetheless, contrary to what researchers on the field showed, we found in our sample that the coefficients of both corruption and education levels are non-significant. Thus, we could assume that for these cities the population's education level has not a crucial influence on the magnitude of the global voters' turnout. Considering our main hypothesis, we can finally conclude that the corruption index level doesn't play a key role in the political participation of citizens. There are various effects that can explain this. One of them being the fact, that given a constant perception of corruption levels over time, the effect on voters' turnout can be marginally decreasing. Besides, a greater stringency on democratic practices (which to some extent depends on the level of political participation of citizens) can imply a lower level of corruption. This is because democratic regimes increase the costs incurred by actors prone to corrupt actions and relationships. In particular, high citizen political participation can prevent abuses of power by politicians and administrative officials and in that sense a reduction on the grand corruption levels would be expected.

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## CONCLUSION

We know that our results have some limits, mainly linked to data accuracy at a city level since we had to generalize the departmental/ province/ federative state's information of mining royalties, ethnical fractionalization, GDP per capita (for Venezuela) and migration balance. At the same time, we had to extend our research to Ecuador and Venezuela, due to lack of information in the Latinobarometro database of cities different from the departments' capital. Therefore, we weren't able to assess closer or proper spatial correlations nor spatial spillover effects. Nevertheless, with our 2SLS model estimations we found out that corruption levels of cities in Colombia, Venezuela and Ecuador only depend significantly and negatively on mining royalties. Thus, the hypothesis that the extraction of natural resources encourages corruptive behaviours doesn't hold in our sample. However, these results have to be taken with hindsight, since we account here only for extraction revenues on legal mining and ignore the possible effects of illegal mining practices. Thanks to our OLS model, we determined that the percentage of voters' turnout (political participation) depends significantly and negatively on the percentage of people born in the city that still live there (Migration Variable) and positively on the percentage of "minorities" on the

local population; meaning that the higher are the minorities represent in the community and the lower is the number of "foreigners", the greater will be the voters' turnout. At the same time, the more the chosen broadcast channels of political information are linked to ICTs the stronger the political participation will be. All these imply that when assessing for an increase of political participation and investment as well as civic engagement, local governments in Colombia, Ecuador and Venezuela should focus on targeting "foreigners" populations and adapt the diffusion of relevant information on political matters to the preferred source of information of their respective community. However, neither corruption levels or average education level have a significant role on voters' turnout, meaning that current levels of political participation in the studied cities depend on other local social and economic characteristics.

Moreover, the work of this paper can be replicated and enriched by including other variables or aspects. First, regarding natural capital, the role of oil extraction can be preconized as well as illegal mining practices. Secondly, in terms of corruption and/or political participation the presence of the FARCS, ELN or another insurgent group can be considered as well as the role of drug trafficking. Finally, on the political participation variables such as the victory margin of the current local government, number of candidates, number of women in high government roles, and the fact of previously voting against the current party in power can be included.

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## REFERENCES

- AGENCIA NACIONAL DE MINERIA COLOMBIA, 2021. Datos Abiertos Colombia. URL: <https://www.datos.gov.co/Minas-y-Energ-a/MINERIA-EN-COLOMBIA-1/utka-ct4k>
- BANCO CENTRAL DE ECUADOR, 2018. Cuentas Nacionales Regionales: Cuentas Cantonales (anuales). URL: <https://contenido.bce.fin.ec/documentos/Estadisticas/SectorReal/CuentasCantonales/Indice.htm>
- BORSKY S. & KALKSCHMEID K., 2019. Corruption in Space: A Closer Look at the World's Subnations. *European Journal of Political Economy*, Vol.59, pp. 400-422.



DANE, 2019. Censo Nacional de Población y Vivienda 2018. URL: <https://sitios.dane.gov.co/cnpv/#!>

DELLA PORTA, 2000. Social Capital, Beliefs in Government, and Political Corruption. In S.J. Pharr, & R.D. Putnam (Eds.), *Disaffected Democracies: What's Troubling the Trilateral Countries?* Pp. 202-227. Princeton: Princeton University Press.

DONFOUET H.P.P, JEANTY P.W. & MALIN E., 2016. Analysing Spatial Spillovers in Corruption: A Dynamic Panel Data Approach. *Papers in Regional Science*, Regional Science Association International, Vol. 97 Issue S1, pp. 63-78.

GIOMMONI T., 2021. Exposure to Corruption and Political Participation: Evidence from Italian Municipalities. *European Journal of Political Economy*.

GOEL K.R. & SAUNORIS J.W., 2014. Global Corruption and the Shadow Economy: Spatial Aspects. *Public Choice*, Vol.161, pp. 119-139.

GLOBAL DATA LAB, 2020. «Global Data Lab de los Estados de Venezuela por PIB per Cápita en el año 2018».

INEC (Ecuador), 2010. Censo de Poblacion y Vivienda. URL: <https://www.ecuadorencifras.gob.ec/censo-de-poblacion-y-vivienda>

INEC (Venezuela), 2011. XIV Censo Nacional de Población y de Vivienda.

LATINOBAROMETRO DATABASE, 2018. URL: <https://www.latinobarometro.org/latContents.jsp>

LACROIX, 2018. En Colombie, échec d'une consultation anticorruption. Article published the 27/08/2018. Last time Consulted: 25/04/2021.

MINISTERIO DEL PODER POPULAR PARA EL DESARROLLO MINERO ECOLOGICO, 2018. Plan Sectorial Minero: 2019-2025. URL: [http://www.desarrollominero.gob.ve/wp-content/uploads/2019/03/plan-sectorial-minero2019-2025\\_reducido.pdf](http://www.desarrollominero.gob.ve/wp-content/uploads/2019/03/plan-sectorial-minero2019-2025_reducido.pdf)

MITTON T., 2016. The Wealth of Subnations: Geography, Institutions, and Within-Country Development. *Journal of Development Economics*, Vol.118, pp. 88-111.

MODY A, MURSHID AP., 2005. Growing Up with Capital Flows. *Journal of International Economics*, Vol. 65 No.1, pp.249– 266.

PINTO J., LEANA C. & PIL F., 2008. Corrupt Organizations or Organizations of Corrupt Individuals? Two Types of Organization-Level Corruption. *Academy of Management Review*, Vol. 33 No.3, pp. 685-709. University of Pittsburgh.

Table 3. Corruption OLS Estimations

. reg corrup \$xlist

Source	SS	df	MS	Number of obs	=	38
Model	.195112146	7	.027873164	F(7, 30)	=	4.05
Residual	.20626024	30	.006875341	Prob > F	=	0.0031
				R-squared	=	0.4861
				Adj R-squared	=	0.3662
Total	.401372386	37	.010847902	Root MSE	=	.08292

corrup	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Minority	-.0672945	.0723168	-0.93	0.360	-.2149851 .0803961
Migration	.1788164	.1403316	1.27	0.212	-.1077791 .4654118
lg_Nat_cap	-.0127949	.0054076	-2.37	0.025	-.0238388 -.0017511
lg_GDP_cap	.0218709	.0187123	1.17	0.252	-.0163448 .0600865
Density	-5.28e-06	.00001	-0.53	0.602	-.0000258 .0000152
cap_c	-.0235561	.0779152	-0.30	0.764	-.1826803 .1355681
d_t_open	-.0359132	.0283229	-1.27	0.215	-.0937563 .0219298
_cons	.5421287	.2332503	2.32	0.027	.065768 1.018489

Table 5. Political Participation OLS

. reg ParticipationPolitica Educ civic\_eng corrup Minority Migration

Source	SS	df	MS	Number of obs	=	38
Model	.314961677	5	.062992335	F(5, 32)	=	8.87
Residual	.227308771	32	.007103399	Prob > F	=	0.0000
				R-squared	=	0.5808
				Adj R-squared	=	0.5153
Total	.542270447	37	.014655958	Root MSE	=	.08428

Participat~a	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Educ	.0079421	.0119333	0.67	0.510	-.0163652 .0322495
civic_eng	.426674	.21282	2.00	0.053	-.0068261 .8601741
corrup	-.1133304	.1781765	-0.64	0.529	-.476264 .2496033
Minority	.3953457	.0654315	6.04	0.000	.2620662 .5286252
Migration	-.3517385	.1378098	-2.55	0.016	-.6324478 -.0710291
_cons	.5727968	.1448791	3.95	0.000	.2776878 .8679059

Table 4. 2SLS Political Participation Estimations

Instrumental variables (2SLS) regression

Source	SS	df	MS	Number of obs	=	38
Model	-.005084176	3	-.001694725	F(3, 34)	=	0.75
Residual	.547354623	34	.016098665	Prob > F	=	0.5309
				R-squared	=	.
				Adj R-squared	=	.
Total	.542270447	37	.014655958	Root MSE	=	.12688

Participat~a	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
corrup	.3584254	.4046834	0.89	0.382	-.4639903 1.180841
Educ	.0045129	.0210507	0.21	0.832	-.0382673 .0472931
civic_eng	.320983	.3581431	0.90	0.376	-.4068514 1.048817
_cons	.2727584	.2362757	1.15	0.256	-.2074116 .7529283

Instrumented: corrup  
Instruments: Educ civic\_eng Hat\_corrup

Table 6. Comparison between 2SLS and OLS

Variable	IVREG	OLS
corrup	.35842536	-.11333035
Educ	.00451287	.00794215
civic_eng	.32098301	.42667404*
Minority		.39534572***
Migration		-.35173847**
_cons	.27275837	.57279684***
N	38	38

legend: \* p&lt;.1; \*\* p&lt;.05; \*\*\* p&lt;.01