

## 0.1 **Ceteris paribus effects of unemployment, presidential approval and political identification on corruption tolerance**

Now the general model as described by Equation ?? is estimated, where  $\mathbf{R}$  is a vector of explanatory variables that the study of the literature on corruption tolerance and normalization suggests. The statistically significant relationships with interaction terms which were determined previously are kept as the key explanatory variables  $x^*$ , with the exception of the confidence in the president variable, as the presidential approval variable captures the same effects. Thus, three models are estimated, whose coefficients are shown in Table 1.

These models include multiple control variables suggested by Moscoso and Moncagatta (2020) and Lupu (2017). Of these, only age is significant and has a negative effect on corruption tolerance, which is a consistent finding across these two studies as well as that by Montalvo (2019). A person older by one year is 4 percentage points less likely to justify corruption, as seen in Table 2. It is possible that a generational explanation can be used for this, where it is older generations that reject corruption more. However, it is also possible that as people age they feel closer to the political and social systems inside a country, which leads them to reject dishonest acts more than their younger counterparts. Using the theory by Ashforth and Anand (2003), it might be that younger people rationalize corrupt acts more since they feel more unattached to “adult” culture, which leads them to a denial of responsibility explanation.

This is supported by the fact that several social and economic problems seem to hit young people more (Vásconez, 2016, Crespo Coello and Crespo Jaramillo, 2019, Cetrángolo, 2020) and that they feel lethargic and distanced with the country’s politics and with political wings (Lucero, 2020). If young people are more likely to be economically disadvantaged, it is also likely that *petty* corrupt practices as bribes, connection-based hiring and others have become institutionalized and socialized in the young Ecuadorian society as the economic payoff of engaging in these attitudes is more attractive. The incentives to be honest decrease as the monetary benefit of engaging in corrupt behavior is higher for disadvantaged people as young citizens that are relatively more disadvantaged.

Table 1: Logit coefficients for modified models

	Model 1	Model 2	Model 3
Constant	−0.674* (0.401)	0.707 (0.468)	−0.351 (0.405)
2016 Dummy	0.887*** (0.145)	−1.217** (0.477)	0.333 (0.252)
Woman	0.124 (0.109)	0.136 (0.111)	0.127 (0.109)
Age	−0.026*** (0.004)	−0.026*** (0.004)	−0.026*** (0.004)
Years of education	−0.041*** (0.015)	−0.038** (0.015)	−0.039** (0.015)
Lives in urban setting	−0.020 (0.132)	0.013 (0.131)	0.009 (0.132)
External political efficacy	−0.047 (0.032)	−0.041 (0.032)	−0.044 (0.032)
Internal political efficacy	0.096** (0.041)	0.093** (0.042)	0.089** (0.041)
Participation in a protest	0.431** (0.204)	0.450** (0.205)	0.471** (0.207)
Interest in politics	−0.249** (0.116)	−0.220* (0.119)	−0.244** (0.119)
Perceptions of corruption	0.000 (0.133)	0.001 (0.137)	−0.033 (0.136)
Exposure to corruption	0.985*** (0.115)	1.003*** (0.114)	1.008*** (0.115)
Unemployment	0.956*** (0.215)	0.296** (0.146)	0.285* (0.145)
Approval of Pres. Performance	−0.132** (0.063)	−0.510*** (0.102)	−0.128** (0.063)
Political Wing	0.028 (0.020)	0.029 (0.019)	−0.025 (0.040)
Unemployment Interaction	−0.908*** (0.275)		
Pres. Approval Interaction		0.543*** (0.122)	
Pol. Wing Interaction			0.081* (0.046)
<i>N</i>	2308	2308	2308
AIC	2201.72	2191.11	2208.60
BIC	2301.92	2290.64	2307.42

**Note:** Logit coefficients of the modified models as described by Equation ???. Standard errors consider design effects of the AB complex survey design.

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

Table 2: Average partial effects for models in Table 1

	Model 1	Model 2	Model 3
Age	−0.004*** (0.001)	−0.004*** (0.001)	−0.004*** (0.001)
Years of education	−0.006*** (0.002)	−0.006** (0.002)	−0.006*** (0.002)
External political efficacy	−0.007 (0.005)	−0.006 (0.005)	−0.007 (0.005)
Internal political efficacy	0.015** (0.006)	0.014** (0.006)	0.014** (0.006)
Interest in politics	−0.038** (0.018)	−0.033* (0.018)	−0.037** (0.018)
Perceptions of corruption	0.000 (0.020)	0.000 (0.021)	−0.005 (0.021)
Exposure to corruption	0.150*** (0.017)	0.152*** (0.017)	0.154*** (0.018)
Unemployment	0.055*** (0.020)	0.045** (0.022)	0.044* (0.022)
Approval of Pres. performance	−0.020** (0.010)	−0.023** (0.009)	−0.019** (0.010)
Political wing	0.004 (0.003)	0.004 (0.003)	0.004 (0.003)
<i>N</i>	2308	2308	2308

**Note:** Average partial effects for the models estimated in Table 1. Data from the open-access AB databases. Standard errors consider design effects of the AB complex survey design.

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

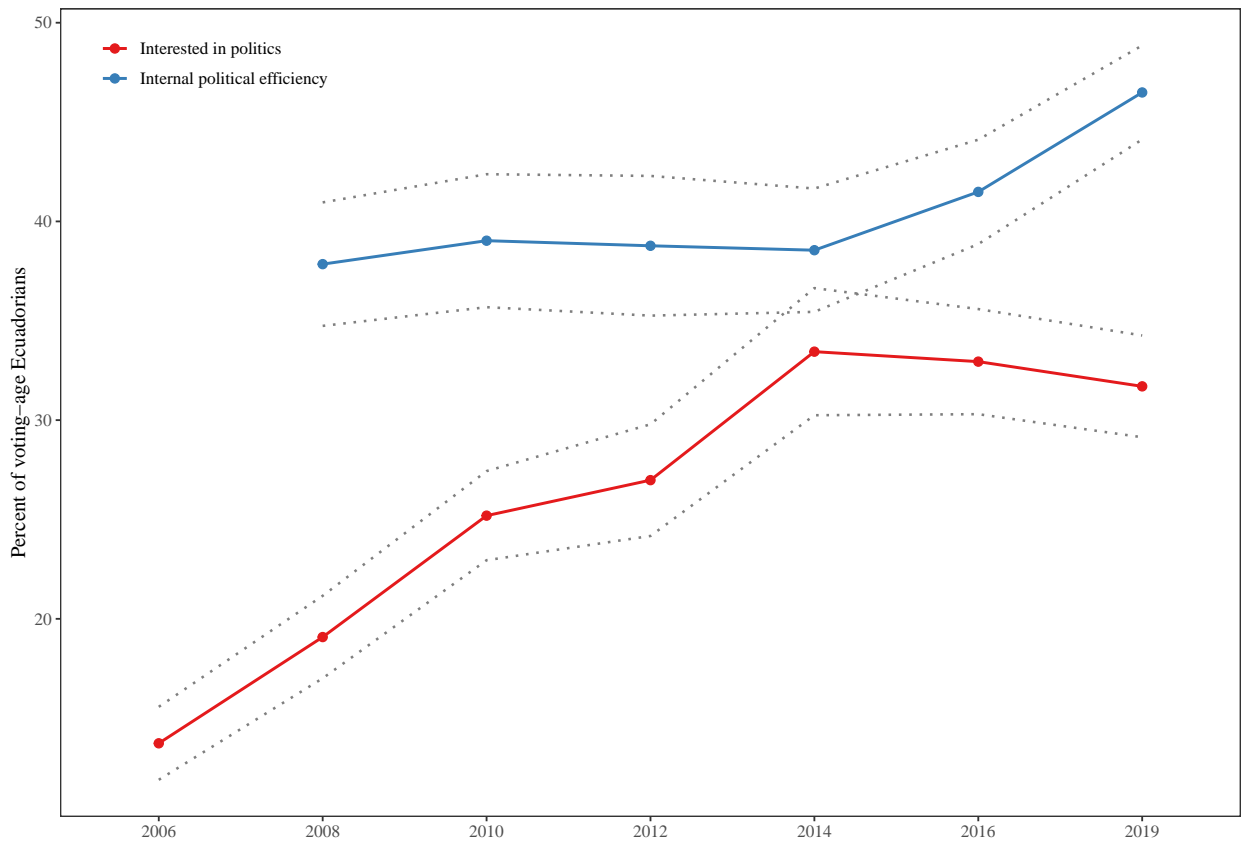
Political efficacy indicators are also included in the regressions. The external political efficacy question, which asks if the respondents believe that politicians serve the interests of the people, has no statistical significance on corruption tolerance. Internal political efficacy asks about how well the respondent understands politics and this control is significant at the 95% confidence level. The sign on the coefficient shows that a person who understands more about the country's politics is more likely to justify corruption: a person answering an additional point of the internal political efficacy is about 1.5 percentage points more likely to justify corruption.

While Moscoso and Moncagatta (2020) find that none of the political efficacy variables are significant for corruption tolerance in 2019, they do find that interest in politics is significant and has a positive effect. That finding is reversed here: interest in politics is significant yet portrays a negative relationship between the two: more interest in the country's politics is actually negatively related with corruption tolerance. A person who reports being interested in politics is about 3.5 percentage points less likely to justify corruption.

Figure 1 shows the percent who are interested in politics and also the percent who understand the country's politics. The gap between these two variables has increased from 2014 from 2016, and have a total historic correlation of 0.19. While they may appear to ask similar things, the two questions may imply different attitudes to politics: the political efficacy question simply asks if citizens are aware of politics and the second one asks if they're interested to enter the political scenario. It might be possible that, when separating these two questions, attitudes of apathy or pragmatism to the political society (understanding politics) are separated from an "idealist" attitude towards it of those who would like to enter politics.

A control for years of education is also added and it is significant, communicating that more educated respondents are less likely to justify corruption. Other things equal, an additional year of education is related to a 6 percentage points reduction in corruption tolerance. This finding is intuitive considering that more education may mean more knowledge about the costs of corruption. The social payoffs for being honest may be higher as also higher education may entail a better economic position which makes engaging in corrupt acts less economically attractive.

Figure 1: Political interest and internal efficiency in Ecuador



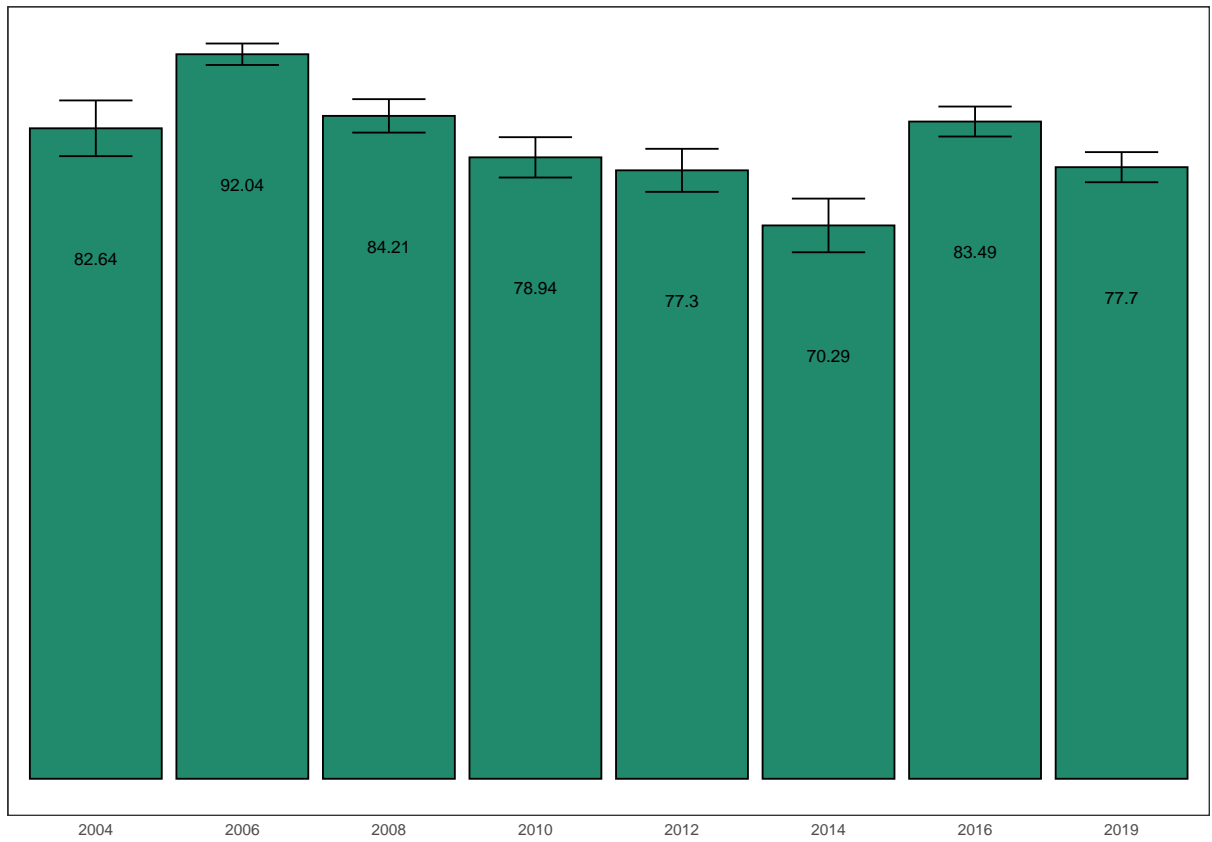
**Note:** A time series of the internal political efficacy variable and the interest in politics variable. The internal political efficacy variable is dichotomized using the standard AB methodology as explained in Appendix A. Dotted lines represent the 95% confidence intervals considering design effects. Data from the open-access AB databases. Figure prepared by the author.

Regarding the variables which measure corruption, it is possible to confirm findings by Moscoso and Moncagatta (2020), Lupu (2017) and Singer et al. (2016): exposure to corrupt acts (paying or being asked to pay a bribe) is also strongly correlated with tolerance to them. A person who has been exposed to some form of bribing is about 15% more likely to justify corruption according to the average partial effects in Table 2. The direction of causality is not clear in this case as it might be possible that a predisposed tolerance to corruption due to external factors makes citizens more likely to be in environments where corruption flourishes. Moscoso (2018) finds that younger people and people with a higher number of children are more likely to be exposed to corruption with the 2016 Ecuador AB data. This may suggest that younger people justify corruption partly because they are more exposed by it: empirical models not shown explicitly show that an interaction term between age and corruption exposure is significant at the 90% confidence level. Corruption perceptions, on the other hand, play no role in determining corruption tolerance for this time period. This is also found by Moscoso and Moncagatta (2020) in 2019, however, Lupu (2017) does find an effect of corruption perceptions on corruption tolerance for the whole Latin American region. An interaction term between year and corruption perceptions is not significant, although Figure 2 shows a significant increase of corruption perceptions between 2014 and 2016 (see Appendix A).

A dummy variable equal to unity for respondents who have recently attended a protest is added and it is very significant. A person who has attended a protest is about 7% more likely to justify corruption, other things equal. The reason why this happens might be related to a explanation of *denial of victim* as proposed by Ashforth and Anand (2003). People who attend protests probably reject the current state of things, which may induce a feeling of contempt against society. They may believe dishonest acts could be justified in these adverse circumstances because they feel corrupt acts can be retribution to other dishonest acts done to them or by alleging that *petty* corruption acts are nothing compared to grand corruption scandals. Since they have “declared” their rejection to the system in general, they have surrendered to its flaws and have no social incentives to remain honest.

Table 1 also shows that after considering several variables suggested by the literature the in-

Figure 2: Corruption perceptions in Ecuador 2004-2016



**Note:** A time series of corruption perceptions in Ecuador. The corruption perceptions question was asked in a slightly different manner in 2016, thus the variable is recoded as explained in Appendix A, to construct this time series. Error bars represent the 95% confidence intervals considering design effects. Data from the open-access AB databases. Figure prepared by the author.

teraction terms, as estimated in Table ??, keep their sign and significance. Even after controlling for several important predictors of corruption tolerance, it is still true that unemployed people justified corruption more in 2014 but reduced their tolerance in 2016. People who approved the job performance of President Correa were less likely to justify corruption in both years, but their rejection of bribes was smaller in 2016. Finally, while the political identification was not important to predict corruption tolerance in 2014, it was significant in 2016; where people who identified as closer to the political right were more likely to justify corruption. To further explore the effects of these three key variables on corruption tolerance, cross-sectional models are estimated for 2014 and 2016 separately and shown below.



Table 3: Logit coefficients for cross-sectional models as seen in Equation ??

	Model 1	Model 2
Constant	−0.006 (0.663)	−0.110 (0.479)
Woman	0.059 (0.204)	0.141 (0.133)
Age	−0.019*** (0.007)	−0.029*** (0.004)
Years of education	−0.030 (0.030)	−0.047*** (0.018)
Lives in urban setting	0.151 (0.238)	−0.075 (0.152)
External political efficacy	−0.032 (0.054)	−0.056 (0.039)
Internal political efficacy	0.164* (0.097)	0.077* (0.045)
Participation in a protest	0.436 (0.301)	0.205 (0.275)
Interest in politics	−0.265 (0.227)	−0.253* (0.136)
Perceptions of corruption	−0.005 (0.207)	0.112 (0.175)
Exposure to corruption	1.520*** (0.178)	0.663*** (0.145)
Unemployment	0.942*** (0.236)	0.042 (0.164)
Approval of Pres. performance	−0.533*** (0.108)	0.025 (0.072)
Political wing	−0.025 (0.040)	0.053** (0.022)
<i>N</i>	1039	1269
AIC	755.79	1434.40
BIC	832.75	1516.11

**Note:** Logit models for the cross-sectional models for 2014 and 2016 as seen in Equation ??. Data from the open-access AB databases. Standard errors consider design effects of the AB complex survey design.

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

Table 4: Average partial effects for cross-sectional models in Table 3

	Model 1	Model 2
Age	−0.002*** (0.001)	−0.005*** (0.001)
Years of education	−0.003 (0.003)	−0.009*** (0.003)
External political efficacy	−0.003 (0.006)	−0.010 (0.007)
Internal political efficacy	0.017* (0.010)	0.014* (0.008)
Interest in politics	−0.028 (0.024)	−0.047* (0.025)
Perceptions of corruption	−0.001 (0.022)	0.021 (0.033)
Exposure to corruption	0.161*** (0.019)	0.124*** (0.027)
Unemployment	0.100*** (0.026)	0.008 (0.031)
Approval of Pres. performance	−0.056*** (0.012)	0.005 (0.013)
Political wing	−0.003 (0.004)	0.010** (0.004)
<i>N</i>	1039	1269

**Note:** Average partial effects for logit cross-sectional empirical models in Table 3. Data from the open-access AB databases. Standard errors consider design effects of the AB complex survey design.

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .