1 Methodology

The AmericasBarometer (AB) survey from the Latin American Public Opinion project is used in this paper to investigate the corruption tolerance increase in Ecuador. This survey was administered in Ecuador and several other Latin American countries from 2004 to 2019, at mostly two-year intervals. It asks about public opinion matters, including democracy, corruption, among others. The open-access AB databases available in the LAPOP website are used for the empirical models. Table 1 presents descriptive statistics for all variables used.

The empirical models estimated in this study will use the 2014 and 2016 rounds of the AB in Ecuador, with $n_{2014} = 1489$ and $n_{2016} = 1545$. The survey is based on a multi-stage national probability design. The survey-design adjusted errors for each of these surveys are $\pm 2.5\%$ and $\pm 1.9\%$, respectively (LAPOP, 2017a; LAPOP, 2017b). Both surveys are self-weighted, however, 95% confidence intervals for the descriptive statistics which are adjusted for survey-design effects are presented when relevant.

The empirical analysis is concerned with the *EXC18* question: "Do you think given the way things are, sometimes paying a bribe is justified?" (Moscoso, 2018, p.96), originally asked in Spanish. The question has been asked in all survey rounds in Ecuador and is the last one after a set of questions regarding corruption exposure and perception. This variable (*ctol*) is equal to 1 when the respondent answers "Yes", 0 when the answer is "No" and dropped from the model otherwise. All models have *ctol* as the explained variable and responses to other questions are used as regressors.

In order to identify the changes in behavior which led to the increase, the survey rounds are pooled and the following general model is estimated:

$$P(ctol = 1|\boldsymbol{X}) = G(\boldsymbol{X}\theta) = G\left[\beta_0 + \delta_0 y_{16} + \boldsymbol{R}'\beta + \delta_1 (y_{16} \cdot x^*)\right] \tag{1}$$

where $\boldsymbol{R}$ is a vector of controls and x^* is a key regressor whose change across time may have significantly influenced the rise of *ctol* between 2014 and 2016. This key regressor is interacted

Table 1: Descriptive statistics for all variables used in the empirical models

Variable	Question code	2014		2016	
		Est.	SE	Est.	SE
Corruption tolerance	EXC18	13.59	1.39	27.18	1.21
Unemployment	OCUP4A	10.06	1.04	22.89	1.2
Confidence in the President	B21A	69.01	1.77	49.64	1.49
Approval of the President	M1	70.26	1.57	55.41	1.43
Economic situation (Worse)	IDIO2	22.93	1.26	51.76	1.45
No political wing	L1	21.49	2.11	8.67	0.74
Center	L1	42.58	1.92	45.7	1.49
Left	L1	22.23	1.25	22.46	1.24
Right	L1	13.7	1.16	23.17	1.15
Women	Q1	50.37	0.34	50.29	0.3
Age	Q2	39.41	0.17	38.64	0.22
Years of education	ED	10.67	0.15	11.43	0.14
Urban	UR	65.21	4.11	66.41	4.07
External political efficacy	EFF1	35.31	1.69	41.93	1.33
Internal political efficacy	EFF2	38.55	1.58	41.49	1.34
Participated in a protest	PROT3	6.82	0.89	4.67	0.55
Interest in politics	POL1	33.45	1.63	32.29	1.35
Perceives corruption	EXC7, EXC7NEW	70.29	1.74	83.49	0.97
Exposed to corruption	EXC 2,6,11,13,14,15,16	26.97	2.01	27.69	1.23

Note: Descriptive statistics table with estimates (Est.) and robust standard errors (SE), where age, years of education and the external and internal political efficacies are arithmetic means. All other variables are percentages, calculated for 2014 and 2016. Standard errors are adjusted for survey-design effects. Data is from the open-access AmericasBarometer.

with a year dummy, y_{16}, which equals unity for 2016 observations. The complete regressors' vector $\boldsymbol{X}$ includes all variables in $\boldsymbol{R}$, the key regressor x^* and the interaction term. The parameters vector θ includes the vector β as well as β_0, δ_0 and δ_1. G is the link function; in this paper I follow the literature and use a logistic function as G.

Consider the partial effect of the key regressor x^* on $P(ctol = 1|\boldsymbol{X})$:

$$\frac{\partial P(ctol = 1|\boldsymbol{X})}{\partial x^*} = \frac{\partial G}{\partial \theta} \cdot \frac{\partial \theta}{\partial x^*} = \frac{\partial G}{\partial \theta} \cdot (\beta_{x^*} + \delta_1 y_{16}) \tag{2}$$

The parameter δ_1 would then measure the ceteris paribus effect of a change in the key regressor x^* from 2014 to 2016 in *ctol*. Therefore, the coefficient of interest in this study is $\widehat{\delta}_1$. If there has been a change in 2016 in x^* which significantly influences corruption tolerance, $\widehat{\delta}_1$ should be statistically significant. Further, a $\widehat{\delta}_1$ coefficient not statistically different from zero would mean that individuals with and without this key characteristic are equally likely to justify corruption across time.

Average partial effects tables are shown for all models. I use survey-weighting to adjust for complex-survey design effects, as suggested by Castorena (2021). Since the sample is self-weighted, survey-weighting does not affect magnitudes, only standard errors.