

Eithel Mc Gowen graduated *magna cum laude* from The University of Memphis in 2017. He earned the degree of BBA with a major in Business Economics and a minor in Finance. Being an international student from Lima, Peru, he made his way to Memphis thanks to a scholarship to play for the University of Memphis Golf Team. Eithel is also a recipient of the Helen Hardin Honors Scholarship. By completing this paper and several honors courses, he graduated with University Honors with Thesis. Eithel is currently working at a hedge fund in Lima and plans to pursue a Master's degree at a US business school in the near future. Besides golf, his interests include investments, politics, and travelling.

Eithel's paper received a *Quaesitum* outstanding paper award.

## **Eithel Mc Gowen**

An Argument for Reducing Value Added Tax Rates in Developing  
Countries: The Uruguayan Case

**Faculty Sponsor**

Dr. Joonhyung Lee



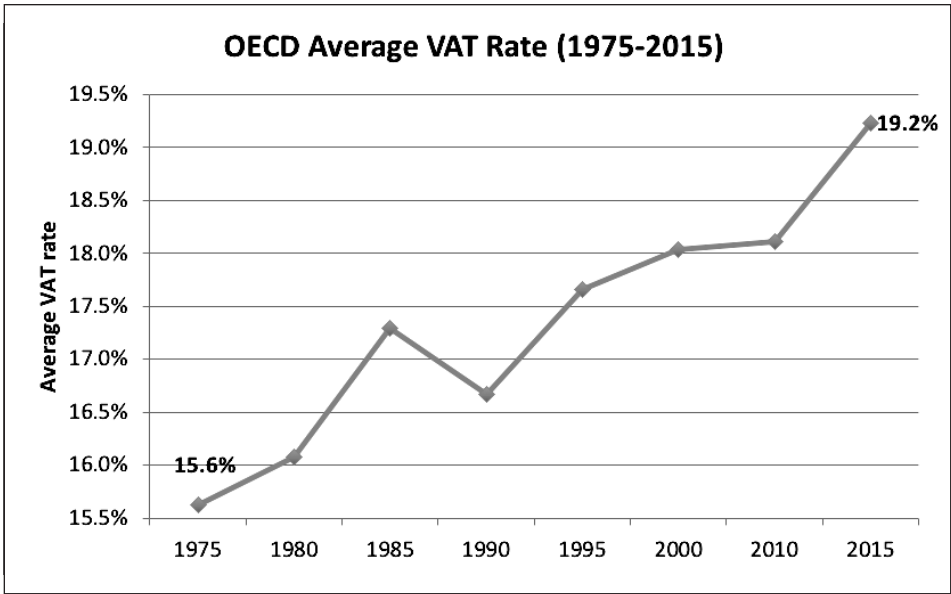
## **Abstract**

This paper studies the effect of reducing value added tax (VAT) rates on tax revenue in developing countries. Developing countries have a larger proportion of firms in the informal sector compared to developed countries, which translates into greater tax revenue gaps and higher tax evasion rates. The hypothesis is that a reduction in VAT rates will decrease revenue in the short run. In the long run, lower rates will create an incentive for small and medium-sized informal businesses to become formal, which will offset the negative impact of the rate reduction and increase revenue. Using Uruguayan data before and after 2007, in which the VAT rate was cut, I find that the rate reduction had a positive impact on tax revenue. I also compare the results of the VAT cut in Uruguay to a VAT increase in Mexico by analyzing firm level data from the World Bank Surveys. Taken together, the results of this paper support the hypothesis that reducing VAT rates in developing countries has a long term positive effect on tax revenue.

# Introduction

The Value Added Tax (VAT) was first proposed in France in the year 1954. It was conceived as a tool to tax consumption for either expanding the budget or closing deficit gaps. Since then, it has been adopted in about 160 countries around the world, including every single country member of the OECD except the United States<sup>1</sup>.

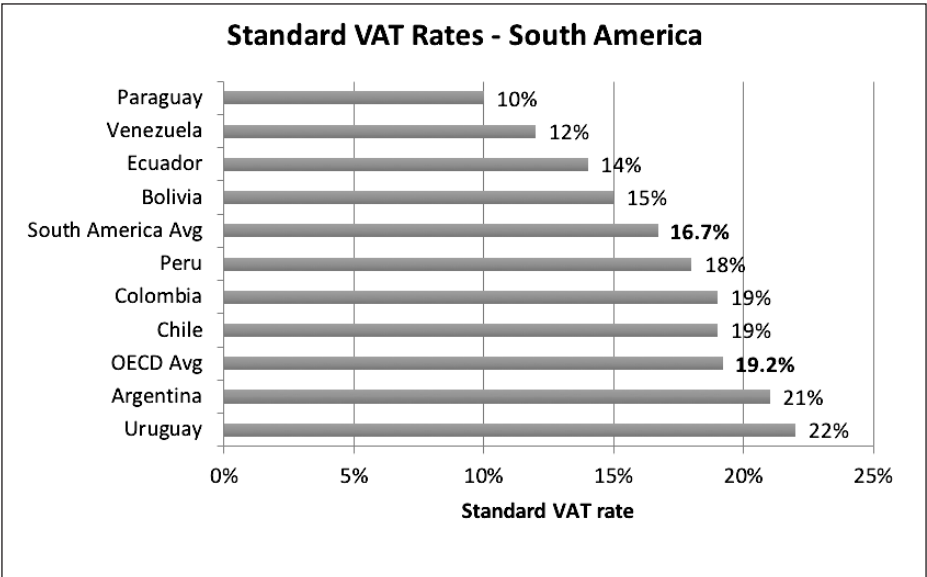
After its adoption in European countries in the 1960s, VAT rates have seen a clear upward trend throughout OECD countries. The average standard VAT rate for OECD countries went from 15.6% in 1975 to 19.2% in 2015. The VAT has not only gained popularity within developed countries, but also in emerging market economies. The average standard VAT rate in South America is 16.7%, with Uruguay having the highest rate at 22%.



**Figure 1.** Historical Average VAT rate in OECD countries

Source: OECD database

<sup>1</sup> Consumption Tax Trends 2014: VAT/GST and excise taxes, trends and policy issues. OECD, 2014.



**Figure 2.** VAT Rates in South America

Sources: PwC Worldwide Tax Summaries, OECD database

Governments in developing countries face a complex series of challenges for taxation that developed countries have been able to solve or attenuate in the past. Well-funded tax authorities and big penalties for not paying taxes, added to a culture that condemns that kind of behavior, together create an environment where the tax revenue gap is minimized. This situation is far from being a reality in emerging market economies, where a large number of small and medium sized businesses operate outside the formal economy. These conditions are evidenced by the proportionally large difference in tax revenues between the developed and developing world. Tax revenues in OECD countries amount to roughly 36% of the gross national income in 2007, compared to 23% in Africa (2007) and 17.5% in Latin America (2004)<sup>2</sup>.

The relationship between tax rates and tax revenue has been well studied and argued in the past. One of the most famous arguments on the

<sup>2</sup> OECD Statistics, [stats.oecd.org](http://stats.oecd.org)

topic is the idea of a curve proposed by economist Arthur Laffer, in which there is an equilibrium level of taxation where tax revenue is maximized. This paper argues that developing countries with VAT rates similar to the OECD average VAT rate would increase tax revenue by reducing their tax rate while approaching the Laffer curve equilibrium. The reasoning behind this hypothesis is that, given the significant size of the informal sector and high tax evasion rates, reducing the VAT rate would create an incentive for informal small and medium sized businesses to become formal. In the short run, tax revenues would decline as a consequence of the tax cut, assuming a constant tax base. In the long run, increasing tax revenues from businesses entering the formal economy would offset the decrease caused by the tax cut.

In order to test the hypothesis, I analyze the case of Uruguay, which reformed its tax code in 2007. Uruguay had a standard VAT rate of 23% before the reform, not only the highest in South America, but also significantly higher than the OECD average of 18% at the time. The Uruguayan government reduced its standard VAT rate from 23% to 22%, while also cutting its reduced VAT rate from 14% to 10%. This change in tax policy provides an opportunity to empirically test the hypothesis by simulating a scenario in which the VAT rate was not cut, and then comparing the results to what actually occurred in terms of tax revenue. I also employ firm level data from the World Bank Surveys to further support the results.

## **Data and Definitions**

### **Data**

The data used for the empirical analysis comes from 3 different sources. Gross Domestic Product (GDP) data was retrieved from the historical accounts database of the Central Bank of Uruguay (BCU). Tax Revenue data was collected from the Uruguayan Tax Authority (DGI) monthly reports. Tax evasion estimates were collected also from the Uruguayan Tax Authority (Vallarino 2004), as well as a study performed by the Center for Economic Research (CINVE) of Universidad de la Republica Oriental del Uruguay. Both sources for tax evasion data used the consumption method in which the tax base is calculated by adding up tax collections from end consumers.

The firm level data was collected from the World Bank Surveys, a series of surveys taken from a representative sample of an economy's private sector covering a wide range of topics, one of them being regulation and taxes. The surveys were conducted in 2006 and 2010 in Uruguay and Mexico. They were distributed by private contractors on behalf of the World Bank and completed by business owners and managers. The timing of these surveys is important because they reflect the sentiment of firms towards the tax regime before and after a VAT rate reduction in Uruguay and a VAT rate increase in Mexico. The results should be taken as an additional indicator of tax policy efficiency at the microeconomic level.

### **Definitions**

***Value Added Tax (VAT):*** is a general tax assessed on the value added to goods and services. It is general because in theory it applies to all commercial activities involving the production and distribution of goods. The VAT is considered a consumption tax because it is passed on through various transactions at different stages of the production process and it is ultimately borne by the consumer. It is very common for countries to have a reduced VAT rate that applies to smaller businesses.

***OECD:*** founded in 1960, the Organization for Economic Cooperation and Development is an intergovernmental organization with 35 members that focuses on stimulating economic progress and international trade.

***Tax Revenue Gap:*** a measure of the gap between ideal tax revenues under perfect enforcement (potential tax revenue) and the actual level of tax revenue.

***Tax Evasion Rate:*** the tax revenue gap expressed as a percentage of the potential tax revenue

***Informal Economy:*** all economic activities by workers or economic units that are – in law or practice – not covered or sufficiently covered by formal arrangements<sup>3</sup>.

---

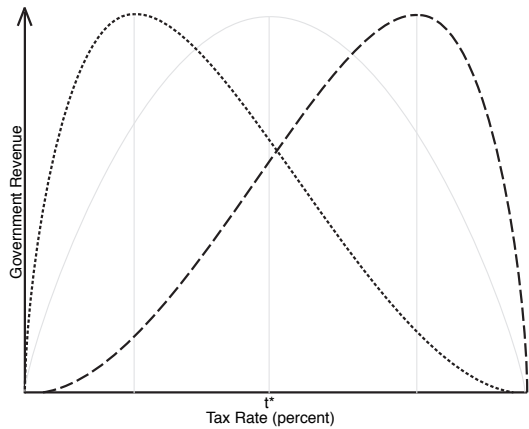
<sup>3</sup> International Labour Conference, 2002



**Informal Sector:** a group of production units (unincorporated enterprises owned by households) including “informal own-account enterprises” and “enterprises of informal employers.”<sup>4</sup>

**Informal Sector Enterprise:** Unregistered and/or small-scale private unincorporated enterprises engaged in non-agricultural activities with at least some of the goods or services produced for sale or barter<sup>5</sup>.

**Laffer Curve:** represents the relationship between tax rates and tax revenue. At a tax rate of 0% or 100%, government will collect no revenue. This paper argues that developing countries with a significant informal sector have a VAT Laffer curve that is more skewed to the left, compared to developed nations.



**Figure 3.** Laffer Curve

## Theory

### Equation for Tax Revenue

Assuming a flat VAT tax rate, tax revenue ( $R$ ) would be determined by the following factors: the tax base ( $B$ ), the tax rate ( $t$ ), and the tax evasion rate ( $E$ ).

---

<sup>4,5</sup> 15th International Conference of Labour Statisticians

$$R = B * t * (1-E)$$

### Function for Tax Evasion

Firstly, I adopt the framework developed by Allingham and Sandmo (1972) to explain the theoretical drivers of tax evasion. The decision to either evade or pay taxes is made by a rational taxpayer or firm under conditions of economic uncertainty due to flaws in the taxation system or distrust for the tax authority. If the expected value of evading taxes is higher than the cost of paying taxes, then the business will choose to evade. The expected value of evading taxes to the perpetrator will then be a function of three factors: the tax rate ( $t$ ), the probability of being detected ( $p$ ), and the economic or legal punishment assessed for evading taxes ( $\theta$ ).

$$E = (t, p, \theta)$$

Assuming *ceteris paribus*<sup>6</sup>, a decrease in the tax rate ( $t$ ) will decrease the expected value of tax evasion, creating an incentive for firms to become formal.

The probability of being detected is directly linked to the capacities of the tax investigation division of the tax authority. These capacities range from technology such as powerful databases, to human capital such as trained and motivated tax officers. The International Tax Compact (ITC) states that “the lack of sufficient capacities in tax administrations reduce the probability of detection that again influences the decision of the taxpayer as to evade or not.”<sup>7</sup> The punishment for evading taxes is another factor discussed by the ITC that affects tax evasion. But having harsh laws that penalize firms that evade taxes is not enough. A strong justice system that applies those laws is also required to reduce tax evasion in theory.

Secondly, I add to the previous function two other factors discussed in existing economic literature that explain tax evasion: institutional factors ( $I$ ), and tax morale ( $M$ ).

---

<sup>6</sup> “All other things being equal”

<sup>7</sup> International Tax Compact (ITC) is an initiative launched by the German Federal Ministry for Economic Cooperation and Development (BMZ)

$$E = (t, p, \theta, I, M)$$

Institutional factors, also described as insufficiencies in tax collection, are an issue especially visible in developing countries. It is explained mainly as inefficiencies or corruption of the agency that is responsible for tax administration and collection. As discussed by Fjeldstad and Moore (2009), it is more likely to find corruption when the finance ministry assumes the role of tax authority. Many emerging market economies have created a separate entity as an effort to mitigate corruption and increase efficiency of tax collection.

Tax morale can also be understood as the willingness to pay taxes. According to the ITC, this factor is driven by low quality of services in return for taxes and the perception of fairness from the population, coupled with low transparency of public institutions and the lack of rule of law<sup>8</sup>. The concept of tax morale is generally applied to the individual taxpayer's case. A great example is the difference in attitude towards paying taxes in Scandinavian countries compared to South American nations. In some specific cases, tax morale also affects a business's decision to either pay or evade taxes. Firms perceiving that they are being unfairly taxed will choose to misrepresent their earnings and commit tax fraud.

Finally, I add GDP growth (GDP) to the model as a measure of the level of economic activity in the country, which gives our final function for tax evasion:

$$E = (t, p, \theta, I, M, GDP)$$

Serra (1991) explains that the level of economic activity of a country is a factor that is considered by the taxpayer or firm when faced with the decision of paying taxes. Periods of economic growth and larger profits would create an incentive to pay taxes. Conversely, evading taxes would be adopted as a survival method during contractionary or negative business cycles.

---

<sup>8</sup> ITC, 2010

## Types of Informal Firms

The following is a classification of informal firms according to La Porta and Shleifer (2008):

***Survival View (Type 1):*** informal firms are not productive enough to ever become formal even if entry barriers were nonexistent. These firms have low human capital and are only able to survive because they do not pay taxes.

***Parasite View (Type 2):*** informal firms that would be able to survive if entry barriers were removed but would choose to stay in the informal sector because it would be a more profitable option given their average productivity.

***De Soto's View (Type 3):*** firms with high productivity levels that would also survive if entry costs were removed and would choose to become formal in that scenario. These types would benefit from entering the formal economy because they are constrained by the size of the firm. Their potential earnings associated with expanding the firm outweigh the costs associated with taxation and regulation.

It is important to discuss the types of firms that exist in theory in the informal sector because this paper assumes that a significant number of tax evading businesses are Type 3 firms. In the case of a VAT cut, each type of business might react differently. A Type 1 firm will never enter the formal economy because of low productivity and human capital, therefore the tax cut would have no effect on this type. A Type 2 firm would also choose to stay informal after a VAT cut because they value higher profitability in the absence of taxes. The only scenario where Type 2 firms would become formal is if tax authorities started to enforce laws more heavily or the punishment for evasion were increased. Consequently, those firms would have a lower value of evading taxes and would choose to be part of the formal economy. Type 3 firms are most likely to start paying taxes after a VAT rate reduction given their high productivity and the potential profits that would come with expansion.

## Model Specifications

### Adjusting for standard and reduced VAT rates

As discussed previously, this paper argues that developing countries with a large informal sector and VAT rates close to the OECD average VAT

rate would benefit from a tax cut by creating an incentive for tax evading businesses to become formal. I look at the case of the Uruguayan tax reform in 2007, when the standard VAT rate was changed from 23% to 22%, and the reduced rate from 14% to 10%. In order to analyze and quantify the effects of the tax cuts, this paper seeks to estimate the tax revenue gap for the years 2007-2012 (assuming the tax reform did not take place) and compare it to the actual tax revenue gap as reported by the Uruguayan Tax Authority (DGI). Going back to our equation for tax revenue, where  $R$  = revenue,  $B$  = tax,  $t$  = tax rate, and  $E$  = evasion rate:

$$R = B * t * (1 - E)$$

Given that there are two different rates, I therefore simplify the equation by replacing the product of the tax base ( $B$ ) and the tax rate ( $t$ ) with the potential VAT revenue ( $VATp$ ):

$$R = VATp * (1 - E)$$

VAT revenue data provided by the DGI and the authority's potential VAT revenue estimations account for revenues from both the standard and reduced VAT rates. In order to estimate the tax revenue gap without the policy change, the tax evasion rate will have to be estimated in the first place.

#### **Adjusting for measurability and data availability**

As discussed in the theory section, firms decide to pay or evade taxes given the following function:

$$E = (t, p, \theta, I, M, GDP)$$

Where:

$t$  = tax rate

$p$  = probability of getting caught

$\theta$  = punishment for evading taxes

$I$  = institutional factors

$M$  = tax morale

$GDP$  = GDP growth

In order to build a model that could estimate the tax evasion rate assuming no policy change (holding  $t$  constant), I discard factors that do not meet conditions of measurability and availability of data, such as punishment for evading taxes ( $\theta$ ), and tax morale ( $M$ ).

### Model

The resulting model for estimating tax evasion is the following:

$$E_t = B_0 + B_1 * \log GDP_t + B_2 * DGIbud_t + B_3 * DGleff_t + u_t$$

Where:

$E$  = tax evasion rate

$\log GDP$  =  $\log(\text{Real GDP})$

$DGIbud$  = budget of the tax authority as a % of GDP

$DGleff$  = expenditures of the tax authority as a % of total tax revenue

$u$  = error

$t$  = time period in years

$\log GDP$  is calculated by taking the logarithm of real GDP in 2005 prices, so it is expressed as an elasticity. Increasing  $\log GDP$  should lead to decreasing  $E$ .

$DGIbud$  is used as a measure of how much money is being allocated by the central government to the Uruguayan Tax Authority (DGI), and acts as a proxy for (p) probability of being caught. The idea is that a funding increase for the tax authority should improve their fraud detection capacities, assuming funds are invested in better technology and personnel training. An increase in  $DGIbud$  would lead to a decrease in  $E$ . Finally,  $DGleff$  is an indicator of efficiency of the DGI that compares total expenditures to total tax revenue and works as a proxy for institutional factors (I). In other words, it shows how many Uruguayan pesos are collected for every peso spent by the tax authority. Larger values of  $DGleff$  would indicate less efficiency and a higher likelihood of corruption in the tax authority. An increase in  $DGleff$  should cause  $E$  to increase.

Variable	Obs	Mean	Std. Dev.	Min	Max
E	12	35.22917	3.881217	27.8	40.1
logGDP	12	5.60818	.0284911	5.563123	5.645853
DGIbud	12	.1551833	.0236693	.1174	.2057
DGIeff	12	1.026667	.1623875	.69	1.28

**Table 1.** Summary Statistics

	E	logGDP	DGIbud	DGIeff
E	1.0000			
logGDP	-0.5399	1.0000		
DGIbud	-0.1475	0.2751	1.0000	
DGIeff	0.5004	0.0468	0.7111	1.0000

**Table 2.** Correlation

## Results

In order to estimate VAT revenue assuming there was no tax reform, I estimate the tax evasion rate for that scenario by running a time series regression with the model described in the previous section. In other words, I seek to simulate what would have happened to tax evasion holding the tax rate constant. The variables used to estimate tax evasion are real GDP growth, the budget of the Uruguayan tax authority (DGI) for a given year as a % of GDP, and an efficiency indicator used by the DGI. All of these variables are proxies for theoretical drivers of tax evasion described above.

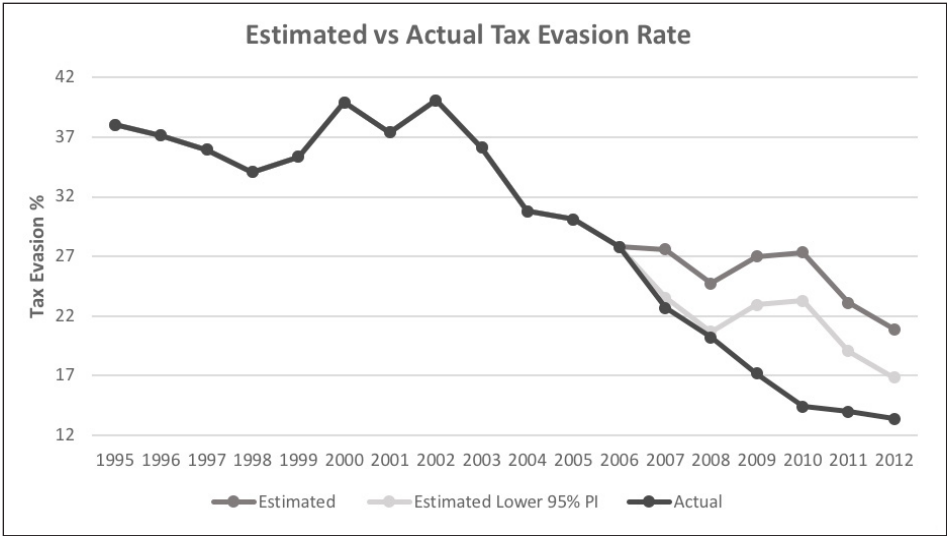
E	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
logGDP	-49.11814	19.74455	-2.49	0.038	-94.64915	-3.587132
DGIbud	-138.0147	26.64297	-5.18	0.001	-199.4535	-76.57593
DGIeff	26.66702	4.131453	6.45	0.000	17.13988	36.19417
_cons	304.732	110.1111	2.77	0.024	50.81536	558.6486

Number of obs = 12  
F( 3, 8) = 36.64  
Prob > F = 0.0001  
R-squared = 0.8771  
Root MSE = 1.5952

**Table 3.** Time Series Regression

The model yields an  $R^2$  of 0.8771, which indicates that 87.71% of the variation in tax evasion (E) is explained by the variables used in the regression. An F-stat of 0.0001 shows the model rejects the null hypothesis at a 1% level. In other words, the model is robust and statistically significant for estimating tax evasion.

The coefficients of the explanatory variables behave in the direction that theory suggests. Economic growth (logGDP) and the DGI budget (DGIbud) have a negative relationship to tax evasion, while the efficiency indicator of the DGI (DGLeff) has an opposite relationship. As mentioned in the previous section, higher values of DGLeff indicate less efficiency at the tax authority. Additionally, LogGDP rejects the null at a 5% level, while DGIbud and DGLeff reject the null at a 1% level, which means all the explanatory variables are statistically significant individually.



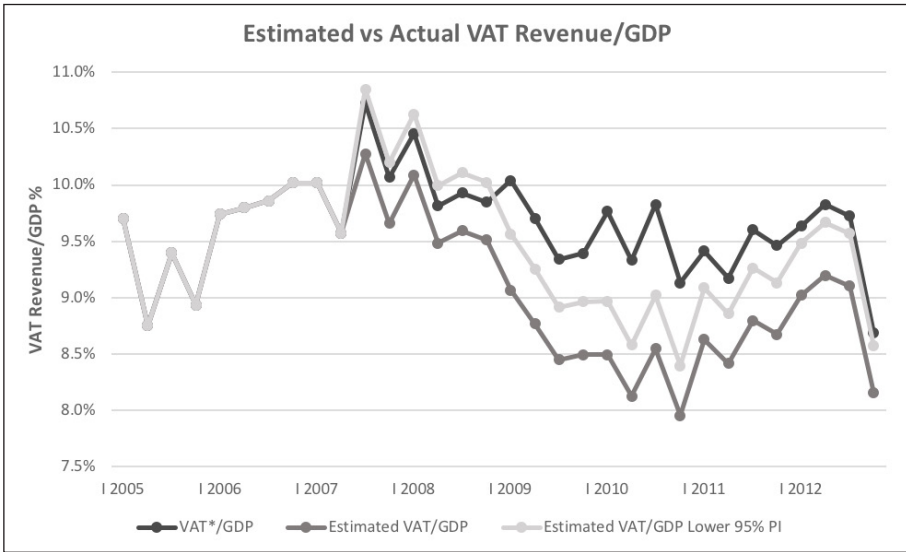
**Figure 4.** Effect of VAT Rate Cut on Tax Evasion Rate in Uruguay

\*Two taxes that represent 0.0024% of GDP were included under the VAT in 2007 and were accounted for.

After developing a robust model to estimate tax evasion, I use actual data for the explanatory variables and plug it into the model to compute the estimated tax evasion rate for the years following the tax cut. By comparing the estimated tax evasion rate, which assumes the tax reform



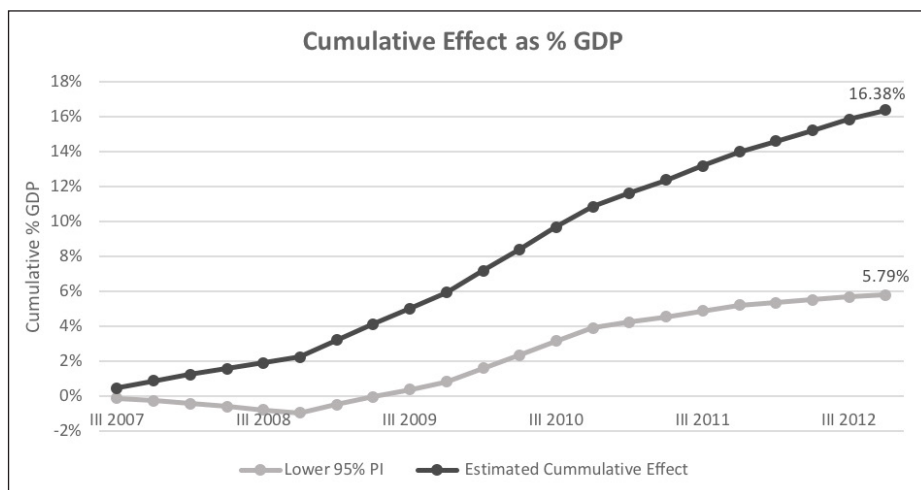
did not take place, and the actual tax evasion rate, it is clear that the policy change had a favorable effect on tax evasion. Even by assuming a worst-case scenario with the lower 95% prediction interval, the effect of the VAT cut starts to show on the year 2009 and continues to make an impact in 2012 with a 3.43% difference in tax evasion.



**Figure 5.** Effect of VAT Rate Cut on Tax Revenue in Uruguay

\*Two taxes that represent 0.0024% of GDP were included under the VAT in 2007 and were accounted for.

In Figure 5, I incorporate the tax evasion data points to the VAT revenue equation to find quarterly revenue estimates. Estimated VAT revenues (no tax cut scenario) are significantly lower than actual revenues, which shows the VAT rate reduction had an overall positive economic impact. Values for the lower 95% prediction interval (95% PI) confirm the original hypothesis of this paper. In the short run, reducing the VAT rate had a negative impact on revenues (95% PI is higher than actual VAT/GDP in 2007 and 2008). By the year 2009, 18 months after the tax reform went into effect, estimated revenues were lower than actual VAT Revenue/GDP. This is a sign that informal firms have come into the formal economy, which broadened the tax base and more than offset the reduction of the tax rate.



**Figure 6.** Cumulative Effect of VAT Cut

Figure 6 gives a sense of the magnitude of the VAT cut effect. For the 5-year period after the tax reform, the policy change increased VAT revenues by a cumulative 16.38% of the GDP. Assuming the lower 95% prediction interval, VAT revenues still increased by 5.79% of the GDP cumulatively. These results show that the effect of the tax reform in Uruguay is very significant.

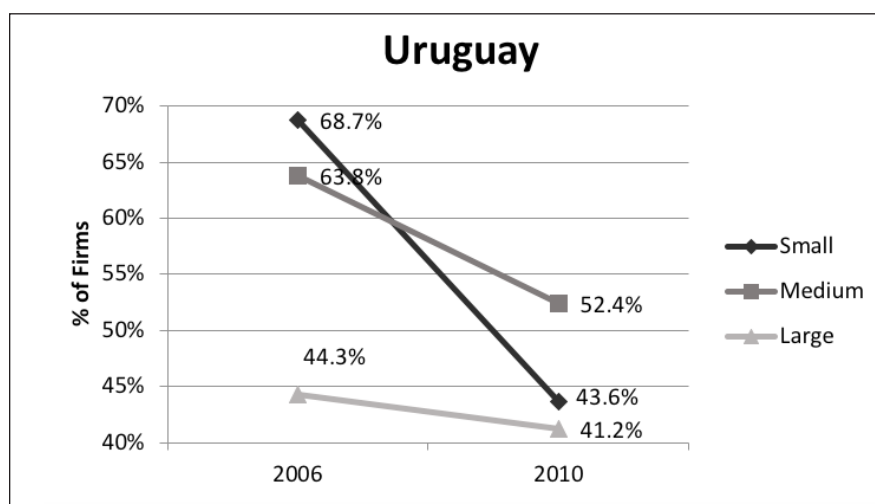
## Firm Level Data

The World Bank surveyed firms on a variety of topics in 2006 and 2010. One of those topics was regulation and taxes. I look into the survey results for Uruguay and compare them to those of Mexico, another emerging market economy that had a tax reform during that period. Uruguay reduced their VAT rate from 23% to 22%, while Mexico increased their VAT rate from 15% to 16%. The purpose of the analysis is to provide evidence for the impact of the tax policy changes at the microeconomic level. To do so, I analyze the responses of small and medium sized firms, which are the ones most likely to be impacted by VAT rate changes. Data is categorized by size of the firm in workers: Small (5-19), Medium (20-99), and Large (100+).

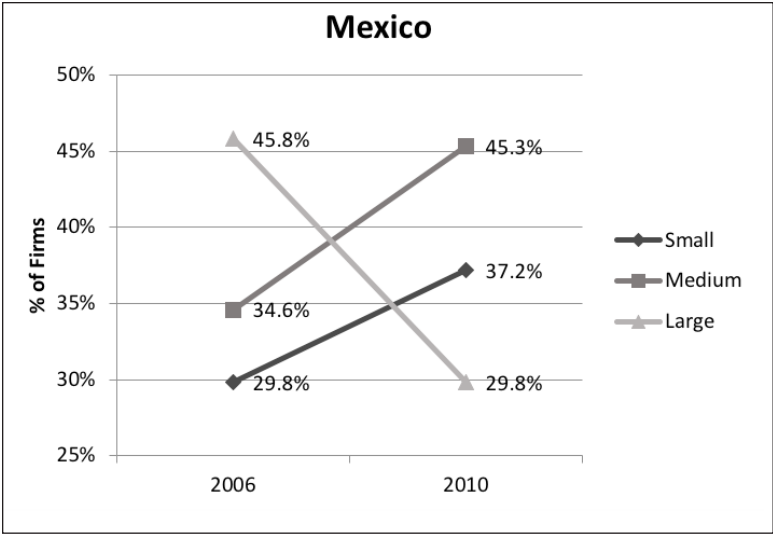
	2006	2010
<b>Uruguay</b>	618	605
<b>Mexico</b>	1445	1389

**Table 4.** Universe of Surveyed Firms

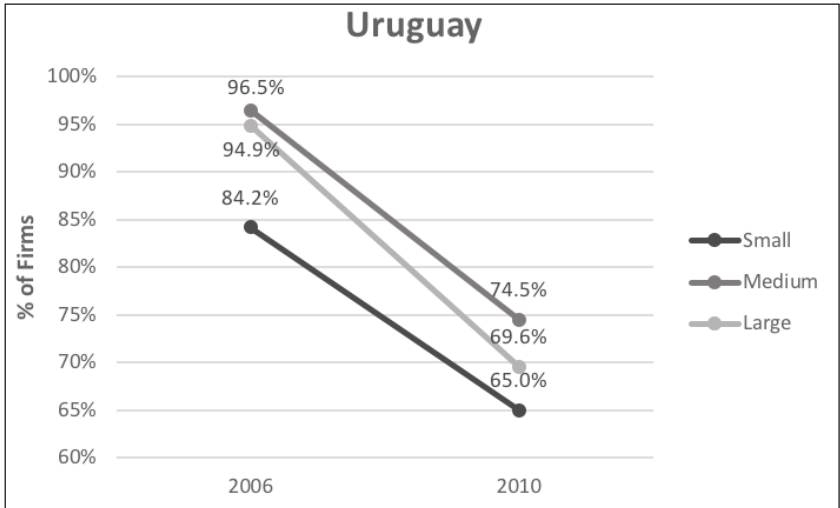
Figures 7a and 7b show the percentage of firms that identify tax rates as major constraint for their businesses. The number of Uruguayan firms that had a negative view on tax rates in 2006 dropped after the VAT rate reduction. More specifically, the percentage of small firms agreeing with the premise dropped from 68.7% to 43.6%, while the percentage of medium-sized businesses in that category went from 63.8% to 52.4%. In the case of Mexico, the number of small and medium-sized firms that viewed tax rates as a major constraint increased from 29.8% to 37.2% and from 34.6% to 45.3%, respectively. These findings show that the VAT cut in Uruguay effectively reduced the expected value of evading taxes, while the VAT increase in Mexico had the opposite effect.



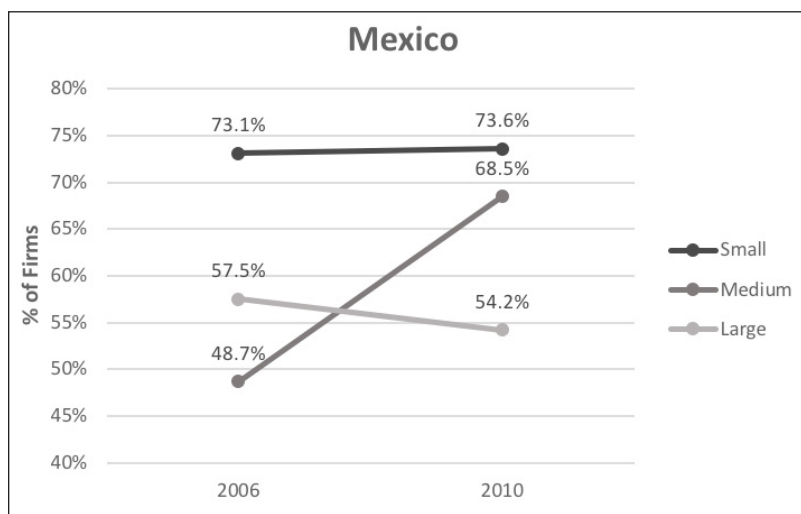
**Figure 7a.** Percentage of firms identifying tax rates as a major constraint



**Figure 7b.** Percentage of firms identifying tax rates as a major constraint



**Figure 8a.** Percentage of firms competing against unregistered or informal firms



**Figure 8b.** Percentage of firms competing against unregistered or informal firms

Figures 8a and 8b show the percentage of firms that stated they compete against unregistered or informal firms. The percentage of Uruguayan firms that identified informal firms as competitors in 2006 fell significantly after the VAT reduction. The percentage for small firms decreased from 84.2% to 65.0%, while the percentage for medium-sized firms decreased from 94.9% to 69.6%. The VAT increase had the opposite effect in Mexico. While the percentage of small firms that indicated they were competing against informal firms was roughly unchanged, the percentage for medium-sized firms increased sharply from 48.7% to 68.5%. The survey results on this section provide evidence at the microeconomic level for the impact of the change in tax policy. More precisely, the analysis of the perspective of small and medium-sized firms in Uruguay confirms the hypothesis that the VAT rate reduction created an incentive for informal firms to pay taxes.

## Conclusions

This paper seeks to find empirical evidence to support the claim that reducing VAT rates in developing countries with large informal sectors will create an incentive for informal firms to pay taxes, which will lead to an increase in national tax revenue in the long run. In order to do that,

I estimated the VAT evasion rate in the hypothetical scenario where the tax reform did not take place. First, I established a function of factors to explain tax evasion by building on Allingham and Sandmo (1972). Then, I transformed the theory into a model, making adjustments for measurability and availability of data. Finally, I used the tax evasion estimates to arrive at the estimated VAT revenues and compared them to actual figures.

The results of the estimation model give strong evidence to confirm the initial hypothesis. The analysis of firm level data also points in the same direction from a microeconomic perspective. It is important to discuss that data is scarce because research is lacking on the subject. Given that limitation, I include a prediction interval or worst case scenario, which also shows the tax reform would be likely to have a positive effect. It is key to point out that this paper makes an assumption that the informal sector is mostly comprised of Type 3 firms which would be likely to pay taxes if the VAT rate was cut.

The results of this paper provide strong empirical evidence to conclude that reducing VAT rates in developing countries creates an incentive for informal firms to pay taxes, which effectively increases tax revenue in the long run.

## References

- Allingham, M. and Sandmo, A. (1972). Income Tax Evasion: A Theoretical Analysis. *Journal of Public Economics*, 1: 323 - 338.
- Banco Central del Uruguay (2017). Informe de Cuentas Nacionales, 1995 - 2012.
- Dirección General Impositiva (2008). Boletín Estadístico.
- Dirección General Impositiva (2013). Estimación de la Evasión en el Impuesto al Valor Agregado mediante el Método del Consumo, 2000 - 2012. Asesoría Económica.
- Dirección General Impositiva (2015). Boletín Estadístico.
- Fjeldstad, OH. and Moore M. (2009). Revenue Authorities and State Authority in Sub-Saharan Africa. *Journal of Modern African Studies*, 47(1): 1 - 18.
- ILO (1993). 15th International Conference of Labour Statisticians.
- ILO (2002). 90th Session of the International Labour Conference.
- International Tax Compact (2010). Addressing Tax Evasion and Tax Avoidance in Developing Countries.
- La Porta, R. and Shleifer, A. (2008). The Unofficial Economy and Economic Development. *Brooking Papers on Economic Activity*, 105(3): 473 - 522.
- OECD (2014). Consumption Tax Trends 2014: VAT/GST and excise taxes, trends and policy issues.
- Serra, P. (1991). Estimación de la Evasión en el Impuesto al Valor Agregado: 1986, Serie Documentos de Trabajo N°5. Departamento de Ingeniería Industrial, Universidad de Chile.
- Vallarino, H. (2004). Breve Historia Fiscal de Uruguay 1990 – 2003, Asesoría Económica – DGI.
- World Bank Group (2006, 2010). Enterprise Surveys.