

Colombia's Informal Economy

An Analysis of Corporate Taxes and Non-Wage Labour Costs



Abstract

This paper uses a case study approach to explore the causes of the relatively high employment in the informal sector of Colombia's economy. In particular, Colombia's corporate taxes and non-wage labour costs are examined as primary causes of the large informal sector. The Economic Motivations theory is used to guide this major research project. The theory states that individuals are rational calculators who weigh the costs and benefits of operating within the formal versus informal sector. Therefore, their decision to enter the formal or informal sectors depends on which option provides the individual or firm with the most benefits. Government policies from comparable countries (Brazil and Ecuador) are examined in this light and reinforce the notion that reducing the costs of entering the formal economy is crucial to the containment of the informal sector. Moreover, evidence from Ecuador suggests that such policies need to be complemented with greater enforcement to ensure that companies follow labour and tax regulations. Based on these findings, it is recommended that Colombia strengthens its tax administration and increase labour and tax inspections on firms to increase the cost of operating informally and generate additional tax revenue. Also, Colombia could gradually reduce its corporate tax rate closer to the revenue maximizing rate with reference to the Laffer Curve theory and decrease non-wage labour costs. We argue that these measures would consequently increase government revenues and economic activity in the long-run. These policies could also be complemented with a minimum wage reform which would allow each Colombian department to set its own minimum wage to better reflect each department's cost of living and productivity levels. This reform would allow Colombian departments to set the minimum wage at a rate that is much less binding than the current national minimum wage which could reduce unemployment and the size of the informal economy.

Key Words

Informal Economy, Corporate Taxes, Non-Wage Labour Costs, Minimum Wage, Economic Motivations Theory

Acronyms

NWLCs – Non-Wage Labour Costs

ILO – International Labour Organization

OECD – Organization for Economic Co-operation and Development

DANE - *Departamento Administrativo Nacional de Estadística* (National Administrative Department of Statistics)

DIAN - *Dirección de Impuestos y Aduanas Nacionales* (National Directorate of Taxes and Customs)

INEC - Instituto Nacional de Estadísticas y Censos

ELN - *Ejército de Liberación Nacional* (National Liberation Army)

FARC - *Fuerzas Armadas Revolucionarias de Colombia* (Revolutionary Armed Forces of Colombia)

UNODC - United Nations Office on Drugs and Crime

CREE - *Impuesto sobre la renta para la equidad* (income tax for equity)

IBD - Inter-American Development Bank

WB – World Bank

Contents

1. Literature Review.....	8
2. Colombia`s Informal Economy: An Overview.....	12
3. Economic Motivations Theory: Cost Versus Benefit.....	21
4. Methodology.....	24
5. Defining and Measuring the Informal Economy.....	26
6. Case Studies: Informal Employment in Brazil and Ecuador.....	29
7. Analysis.....	36
8. Policy Options for Colombia.....	42

Introduction

The transition that Colombia has gone through over the past few decades has been quite remarkable. What was once known as the kidnapping capital of the world and one of the most dangerous countries has found a new life. In fact, since the early 1990s, Colombia has begun to escape its long history of violence and instability that had plagued it for centuries. The dismantling of the Cali and Medellin cartels, and the ongoing peace processes with the Revolutionary Armed Forces of Colombia (FARC) and the lesser known National Liberation Army (ELN), exemplify the progress that Colombia has made with regards to security within its borders. In fact, from 1995 to 2014 the homicide rate per 100 000 people was more than cut in half, going from 71.8 to 27.9 (World Bank, 2014).

With the help of its newfound stability, Colombia has managed to gradually increase its economic output and attracted foreign direct investment (FDI). For instance, its GDP went from US\$ 159 billion in 1992 to US\$ 351 billion in 2015 (in constant 2010 US\$), and during the same period, GDP per capita went from US\$ 4,472 to US\$ 7,447 (in constant 2010 US\$), indicating a significant increase in productivity. Also, FDI inflows into Colombia went from 1.5% to 4% of GDP from 1992 to 2015, mainly aimed at the natural resources sector (World Bank, 2015).

Despite these impressive developments, however, Colombia continues to be marred by abnormally high levels of employment in the informal sector relative to its level of economic development. In fact, in 2013 informal employment represented 51.4% of the employment in Colombia according to Colombia's department of statistics (DANE). This is compared to a 47.7% average for Latin America and 51.1% for its neighbour Ecuador in 2012 (ILO, 2014), a country below Colombia in terms of GDP per capita (US\$ 5 366 in 2015, measured in 2010

constant US\$) (World Bank, 2015). Since higher rates of informality are usually associated lower levels of economic development, the case of Colombia is quite intriguing.

The high levels of informal employment in Colombia has led many researchers and international organizations to look at its causes. Subsequently, much of the research and literature has pointed to the taxation imposed on Colombian firms as one of the primary culprits. For instance, in a 2015 report the Organization for Economic Co-operation and Development (OECD) indicated that “the statutory corporate income tax rate at 34% is high by international standards and discourages investment, especially outside the oil and mining sector”, and therefore also discourages formal job creation.

Another cause that routinely appears in research are high non-wage labour costs (NWLCs), which primarily include the payroll tax and social security contributions, and represented approximately 51% of the national minimum wage in 2012 in Colombia (Peña, 2013). Similar to the effects of high corporate taxes, high NWLCs increase the cost of becoming and remaining formal for both firms and workers. This “generates incentives for workers to avoid compliance either voluntarily (through exit from the formal workforce in response to labour supply behaviour) or involuntarily (through exclusion from formal jobs related to labour demand behaviour) (Mondragon et al., 2010, p. 81).” The World Bank’s annual Doing Business report captures the high non-labour costs and the corporate taxes. In fact, the survey ranks Colombia 139th out of 190 countries in 2017 in their Paying Taxes category. The report found that the total tax rate for Colombian companies as a percentage of profit was 69.8%, much higher than the Latin America & Caribbean (46.35%), and OECD (40.9%) averages.

To guide this major research project, I will be using the Economic Motivations theory to frame the analysis. More concretely I propose it as an explanation of why many Colombian

entrepreneurs and workers are reluctant to formalize their operations. This theory suggests that “if there is an absence of societal restraints or mechanisms to control behaviour, and potential benefits may be accrued by skirting social restraints, individuals will act outside those restraints” (Webb et al., 2013, p. 605). In other words, if the costs of operating formally (including the risk of penalties and formalization costs) are greater than the expenses of operating informally, then entrepreneurs and workers will almost always operate in the informal sector since the amount of income they can appropriate from their work is increased.

To gain a better understanding of Colombia`s informal economy the following questions will be posed and answers proposed: 1. Do Colombians tend work in the informal sector out of necessity or choice? 2. Why should the Colombian government seek to decrease the size of the informal economy? 3. What are comparable countries, Brazil and Ecuador, doing to successfully formalize their economies? 4. What is the political feasibility of corporate tax and NWLCs reforms? Other researchers have already explored many of these questions but these questions have yet to be analyzed together thoroughly in a single paper. Therefore, this article will contribute to the existing literature by learning from the policies of Colombia, Brazil, and Ecuador with regards to the informal economy and determining which policies, if implemented or modified, would be the most efficient in Colombia.

To analyze the aforementioned research questions, this paper is divided into eight chapters. First, I will conduct a literature review of corporate taxes and NWLCs. Second, this major research project will conduct an overview of Colombia`s informal economy, including examining how it has changed over time, the current ramifications the informal sector has on Colombian society and its economy, and recent policy developments. Third, this work will address the chosen theoretical framework for this project, the Economic Motivations theory. Fourth, I will go into

detail on the methodological aspect of my research. Fifth, this paper will take a look at how the informal economy is defined and measured. Sixth, I will examine policies implemented in Brazil and Ecuador, designed to reduce the size of the informal economy and draw lessons from their successes and failures. Seventh, I will conduct an analysis using the four research questions mentioned above. Finally, policy recommendations will be made based on the analysis of the information examined in this paper.

1. Literature Review

A. Corporate Taxes

The effects of corporate taxes on investment and entrepreneurship are one of the main issues in both public finance and development, as its effects matter not only for the evaluation and design of public policy but also for thinking about economic growth (Djankov et al., 2010). Unsurprisingly, most research has found that corporate taxes have a negative impact on investment, however studies differ with regards to estimates of magnitudes (Djankov et al., 2010). Schneider (2015) argues that tax policies and state regulations are the most influential factors in determining the size of the informal economy. This is because any increase in the cost of capital, including taxes, can reduce output in the labour market, by inducing factor substitutions (e.g., replacing workers with machines or vice versa). It also reduces labour productivity (since taxes decrease demand for both capital and labour) (Lora and Fajardo-Gonzalez, 2015). Thus, corporate income tax can cause production to shift from the formal to the informal sector (Lora and Fajardo-Gonzalez, 2015).

Research has also assessed the employment effect of corporate taxes through potential complementarities (i.e., labour and capital) in Chile. Martínez, Morales, and Valdés (2001) found

that the labour to cost of capital elasticity is near 0.2, implying that, by increasing cost of capital, a higher corporate tax rate should depress labour demand.

Cerda and Larrain (2008) analyzed corporate taxes and the demand for labour and capital in Chile and concluded that corporate taxes had differing impacts on different firm sizes and that an increase of 1% in corporate taxes reduces labour demand by 0.2% and capital stock by 0.12%. With regards to firm size, the study concluded that the impact of corporate taxes on labour demand is significantly higher in large corporations than in small enterprises (as a result of their flexibility to hire and fire workers since they are usually not credit constrained). On the other hand, the study concluded that capital demand is more responsive to a corporate tax change among small and medium firms (as a result of their borrowing constraints, especially in the context of developing countries). They go on to add that:

While capital is an important input for small business firms, labour is by far the most fundamental production input and bears the larger share of production costs in developing countries. In that scenario, and given the complementarities between labour and capital, the impact of corporate taxes on firms may be quite large through potential distortions on capital and labour inputs. (Cerda and Larrain, 2008, p. 187)

These findings are quite noteworthy for Colombia considering that around 96% of the country's economic units are classified as micro enterprises (with up to 10 employees) (ILO, 2014).

Vergara (2010), studied the impact of the lowering of corporate tax rates in Chile in the 1980s and also found that it had a significant effect on economic development. In fact, Vergara concluded that the reduction of the corporate income tax was one of the major determinants of the investment boom of the late 1980s and early 1990s in Chile. Like Cerda and Larrain (2008), Vergara found that taxes affect investment in two ways:

1. Higher taxes increase the cost of capital (cost of capital channel)
2. They reduce internal funds available for investment (liquidity constraint channel)

Steiner (2014) studied taxation rates in Colombia and found that companies pay a significant portion of the tax burden compared to individuals, which affects business competitiveness and almost certainly compromises progress by reducing incentives for domestic and foreign firms to invest.

B. Non-Wage Labour Costs

Like corporate taxes, NWLCs increase the total costs for firms and employees and can, therefore, contribute to shifting labour to the informal economy. NWLCs, as the name suggests, are the costs incurred by the employer other than wages which include the payroll tax (employer contributions to finance public social services such as job training and childcare), and social security contributions (healthcare and pensions, for example, which are paid directly by the employer and employee in Colombia).

Kugler and Kugler's (2009) research suggests that the degree to which NWLCs affect formal employment depends on the extent to which they can be passed on to workers in the form of lower wages. Their work showed that a 10% increase in payroll taxes in Colombia lowered formal employment by between 4% and 5% and reduced wages by only between 1.4% and 2.3%. In contrast, Galiani and Kidy (2010), studied Argentina and found that increases in payroll taxes had minimal effect on employment and 55% of the payroll tax was shifted to the workers in the form of lower wages. These differences in findings are most likely due to the presence of a binding minimum wage in Colombia which prevents employers from passing much of the NWLCs to their employees. In fact, in Colombia, the minimum wage which represented 71% of the average Colombian wage in 2011, is one of the highest minimum wage to median wage ratios in the world (Joumard and Velez, 2013). The minimum wage is especially binding in the

poorest, low-productivity regions of Colombia, where it is above the median and average income (Joumard and Velez, 2013). These findings are consistent with other research that indicates that:

...the impact of payroll taxes on employment depends on how much workers value the benefits received from those taxes, and on the degree of wage rigidity. If workers do not fully value benefits and there is some degree of wage rigidity, higher payroll taxes will probably decrease employment and increase unemployment. In the presence of informality, formal sector employment is likely to fall. Lora and Fajardo-Gonzalez, 2016, p. 80.

These findings are also consistent with minimum wage theory (see Figure 1) that suggests that a binding minimum wage will increase unemployment and therefore informality, by setting a price floor above the market wage.

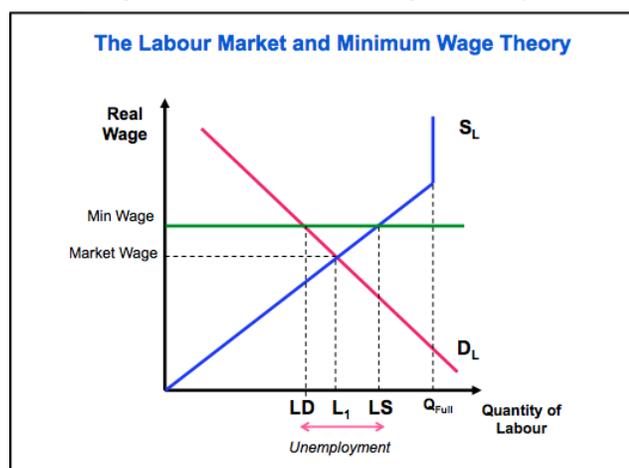
Sojo (2016) explored the role of social security contributions and informality in

Latin America. She argues that the avoidance and evasion of contribution payments are related to three simultaneous conditions:

- the employee's willingness to pay contributions (thus the cost/benefit analysis that employees make when considering to operate formally versus informally)
- employers or bosses choose to evade or disregard the payment of social security contributions compared to paying other costs and expenses; and
- government supervision tolerates such forms of evasion or lacks the capacities to prevent, identify or punish them

She goes on to add that in this context, “it is essential to consider the legitimacy of social protection systems, for when their legitimacy is called into question there is an increased propensity to avoid compliance with contribution obligations and taxes” (Sojo, 2016, p. 76). In

Figure 1- Minimum Wage Theory



Source: Wordpress.com

other words, when the benefits accrued by social security contributions are not valued as much as the benefits of operating informally, workers and employers have an additional incentive to stay or become informal.

Likewise, Cuesta and Olivera (2014) also look at the role of social security contributions but in the Colombian context. They find that the co-existence of contributive insurance programs (paid for by formal employment) and subsidized or assistance insurance programs (paid for by the government) create a perverse subsidy to informality and a tax for formality. Thus, due to the high costs of contributive health care insurance and the presence of free healthcare for low-income populations, many workers and employers try to avoid these costs and stay informal (more on this in the following sections).

2. Colombia`s Informal Economy: An Overview

A. Policy Developments Related to the Informal Economy

Although Colombia has managed to reduce its unemployment rate over the years it still has a relatively high unemployment rate at 10.6% as of March 2017 (DANE), well above the Latin America and Caribbean average of 8.1% in 2016 (ILO). In fact, despite the progress made by Colombia in terms of unemployment, 9 of its 23 major cities have unemployment rates above 13% (see Table 1). Therefore, in the presence of relatively high unemployment we can observe that in the Colombian context, the informal economy is essential for many in terms of earning a wage for their daily needs. However, despite the benefits brought by the informal sector, the Colombian government views the informal sector as: “One of the major barriers to expanding GNP growth, productivity, and competitiveness. It implies misallocation of human resources in

low-return activities, and hence low job quality, all together considered as the main problem of poor people in the country (Ferreira, 2016, p. 144.).”

Yet, policies implemented by the Colombian government over the past few decades have not always helped in diminishing the size of the informal economy. For instance, Law 100 of 1993 had a strong negative impact on formal employment. Law 100 reformed the social security system, including pensions, complementary social services, and health insurance. The social security reform of 1993 increased health and pension contributions by between 10.5% and 11.5% which increased informal employment considerably (Kugler and Kugler, 2009; Mondragon et al., 2010).

Health sector reforms were the focus of Law 100 and aimed to achieve universal health insurance coverage through the creation of two health insurance systems: a contributive and subsidized health insurance systems (Camacho et al., 2013). The contributive health

insurance plan, which was implemented in all of Colombia after the passing of the law, made health insurance mandatory for all formal workers (to which employees and employers are required to make contributions). On the other hand, the subsidized health insurance plan was designed for the poor and eligibility was determined using a Poverty Index Score calculated with a government questionnaire (Camacho et al., 2013). Thus, this reform created a situation in which social benefits were linked to employment status and created a strategic behaviour by some individuals to avoid the high costs of formal employment by operating informally. In fact,

Table 1 - Unemployment by Major City – March 2017

Cucuta	18.30%
Quibdo	17.90%
Rioacha	16.70%
Armenia	15.30%
Popayan	14.90%
Ibague	14.50%
Villavicencio	13.90%
Valledupar	13.40%
Florencia	13.20%
Neiva	12.80%
Manizales	12.70%
Cali	12.50%
Medellin	12.10%
Bogota	11.70%
Sincelejo	11.20%
Monteria	11.10%
Tunja	11.00%
Pasto	10.40%
Pereira	10.10%
Bucaramanga	10.00%
Cartagena	9.60%
Barranquilla	8.00%
Santa Marta	7.90%

Source: DANE

Camacho et al., (2013) found that the healthcare reform on own its increased informal employment by 4%.

In 2013, the Colombian government implemented a tax reform aimed at raising the redistributive impact of taxes, as well as reducing tax evasion and informality. This tax reform reduced NWLCs by 13.5% between 2013 and 2014 (Morales and Medina, 2016). According to Morales and Medina (2016), the implementation of the reform created between 213 thousand and 225 thousand formal jobs in the short run and between 540 thousand and 603 thousand jobs in the long run. The 2013 reform also broadened the corporate income tax base. It reduced the corporate income tax from 33% to 25% but created an additional 9% tax called “income tax for equity” (CREE) applied on a broader tax base. This tax was applied mainly on mining, construction companies, and banks. Proceeds from the tax were earmarked for social welfare programs, namely for training programs by the National Learning Service (SENA), childcare provided by the Colombian Institute for Wellbeing (ICBF), and the healthcare social security system (OECD, 2013).

Moreover, since 2000 a number of legislative initiatives have been implemented to directly promote entrepreneurship and the formalization of the economy. Between 2000 and 2011, Law 590 was passed, which was later modified by laws 905, 1151, and 1450, which were designed to support micro and small enterprises (MSE) (ILO, 2014). From these laws came the creation of the National MSE System (made up of regional MSE councils, the Superior Council on Microenterprise, and the Special Council on Small and Medium-sized Enterprise), which is responsible for providing MSEs with financial and non-financial support (ILO, 2014). Law 1429 on the Formalization and Creation and Employment Colombia, passed in 2010, was designed to increase the benefits of formality through business development programs and to reduce costs

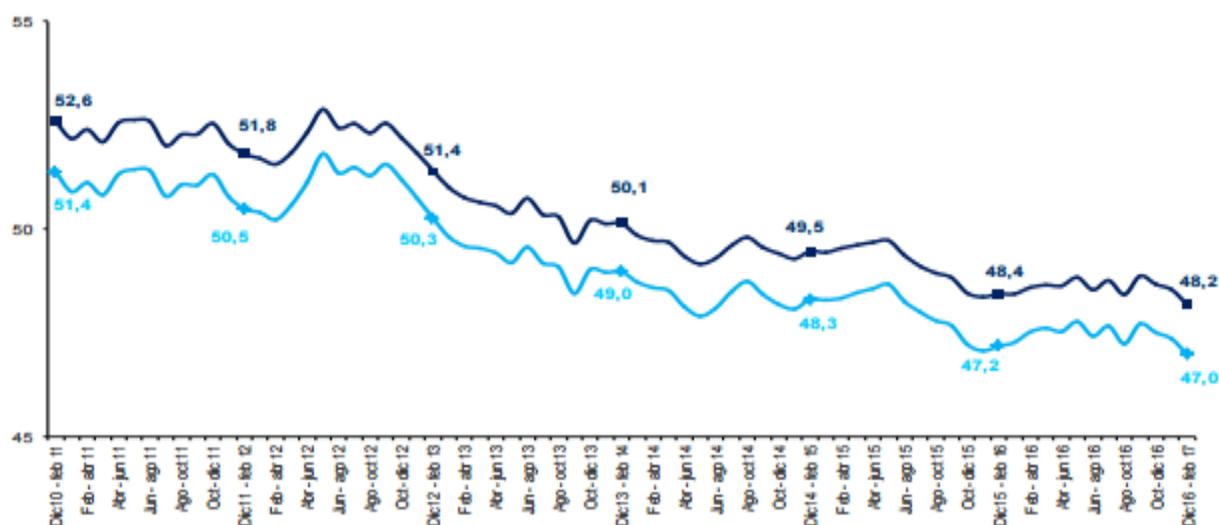
through the reduction of procedures and the progressive payment of some taxes and social contributions (ILO, 2014). Under this law, businesses categorized as small (i.e., with up to 50 employees and fixed assets totaling 5001 monthly minimum wages) that decide to incorporate are not required to pay corporate income taxes for their first two years following their incorporation. Afterwards, they are subject to a reduced corporate income tax rate of 25% of the general income tax rate in the third year, 50% in the fourth year, and 75% in the fifth year (Perret and Brys, 2015). However, the impact of this incentive was relatively limited as the total burden on small businesses of the value-added tax (VAT), the CREE tax, and the wealth tax, remained high (OECD, 2015).

While reduced corporate income tax rates are targeting certain types of companies are common in many countries, they can create economic distortions if not designed in an efficient manner (Perret and Brys, 2015). In the case of Colombia, because there is a threshold to benefit from the reduced corporate tax rate, businesses have an incentive to remain small or to split up into different businesses (Perret and Brys, 2015). In fact, in Colombia it is reported that many small businesses split up after six years to qualify as a new business and remain sufficiently small (Perret and Brys, 2015). Also, in a 2013 report published by DIAN, they found that only 2.7% of the firms created in 2011 (or 6 441 firms) in Colombia registered for the benefits associated with the new law. These data suggest that firms are still identifying the informal sector as more beneficial despite the incentives created by the law.

In late 2016, the Colombian government passed law 1819, which eliminated the CREE tax on corporations starting in 2017, but kept the total corporate tax rate at 34%. Starting in 2018 the corporate tax rate will be reduced to 33%. However, this is the same statutory corporate tax rate that was in place before the 2013 tax reform.

Regardless of many counterproductive policies mentioned above, the informal employment rate (as a percentage of workers employed in the informal sector) in Colombia have been steadily decreasing over the past seven years (see Figure 2). In fact, there has been a 4.4% decline in informality since the end of 2010 to the beginning of 2017 in Colombia's 23 largest cities. It is hard to say to what extent the laws and initiatives implemented by the government of Colombia have to do with this decrease in informality since there is limited research available on the subject. What is clear however is that progress has been made regarding lowering NWLCs, even if they remain high by international standards. With regards to corporate income tax, the statutory rate of 34% (and 33% starting in 2018) is still a major deterrent to operate in the formal sector.

Figure 2 - % of Working Population Employed in the Informal Sector (2010-2017)



Source: DANE

Legend: Light Blue= 13 largest cities, Dark Blue= 23 largest cities

A. Characteristics of Informality

Employment in the informal sector in Colombia is higher for women than men. In fact, in 2012, 58% of women and 52% of men worked informally (Peña, 2013). The higher ratio of women to men working in the informal economy is consistent with the Latin American average where, in 2012, 50% of women and 45% of men worked in the informal economy (ILO, 2014).

With regards to the average age of informal workers in Colombia, studies have found similar results. For instance, Lozano and Dias (2014) found that in the city of Bucaramanga, most those working informally were in between the ages of 32 and 40. Martinez et al., (2017) studied informal street vendors in downtown Cali and found that the average age of the vendors was 41 years old. Lozano and Diaz (2014) suggest that it is difficult for many informal workers in this age range to obtain formal employment since many potential formal employers consider them too old to obtain a formal job for the first time.

Martinez et al., (2014), found that only 22% of the street vendors surveyed in Cali had completed high school and that 6% had studied at the post-secondary level. Orozco et al., (2008) obtained similar results when surveying street vendors in Bogota, with 26% of respondents having completed high school and 0% having gone to university.

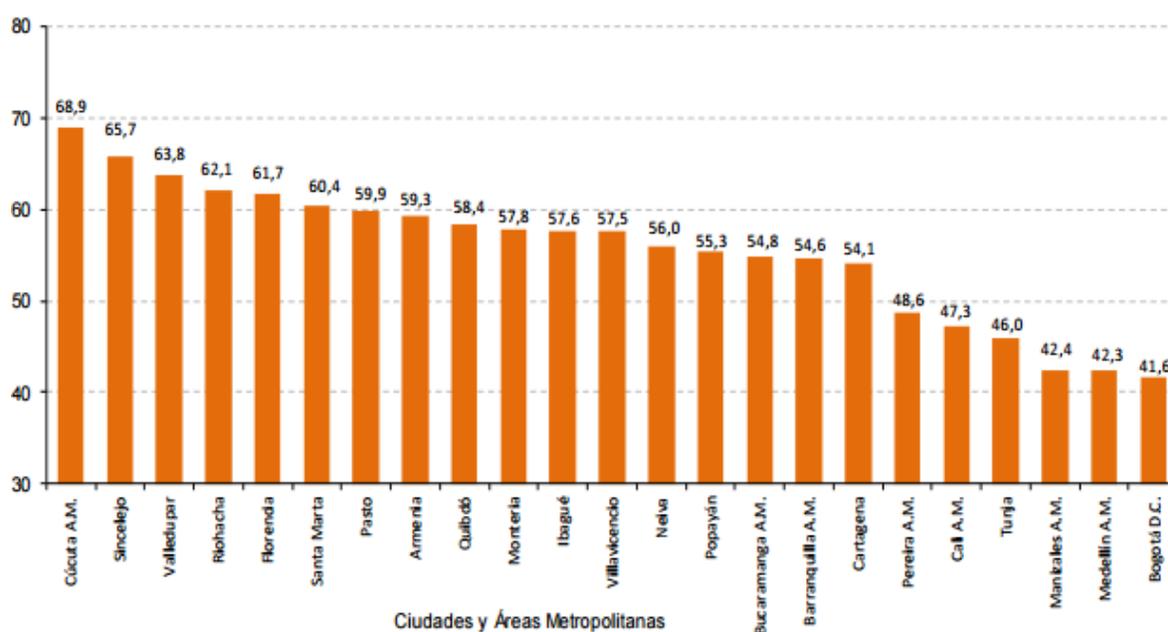
The survey of Martinez et al., (2014) showed that 82.7% of the vendors are in the low socio-economic strata, 16.7% in the middle, and a small percentage in the high strata. Additionally, they found that, compared to the rest of Cali's population, street vendors worked longer hours, and were more likely than the general population to be disabled or from an indigenous background.

According to Martinez et al., the average salary of a formal sector worker in Cali was US\$ 459 per month while informal workers earned US\$ 306 per month, just above the US\$ 304 per month

minimum wage for 2014. Yet, informal workers in Cali's downtown area earned on average US\$ 464 per month. These findings are consistent with Lozano and Diaz's (2014) results in the city of Bucaramanga where the clear majority of informal workers surveyed earned the equivalent of between one and two minimum wages in 2014. Their research also reported that the most popular working place for informal workers in Bucaramanga were fixed establishments (commonly associated with higher earnings) that sell food, magazines and newspapers, or cellphone accessories. This was followed by semi-fixed workplaces which include food, clothes, artisan vendors, as well as shoeblacks.

Informality in Colombia also varies greatly according to geography. In fact, according to DANE, the lowest informality percentage is in Bogota at 41.6% and the highest is in Cucuta at 68.9% as of February 2017 (see Figure 3).

Figure 3 - Informality in 23 Largest Cities (% of Workforce) February 2017

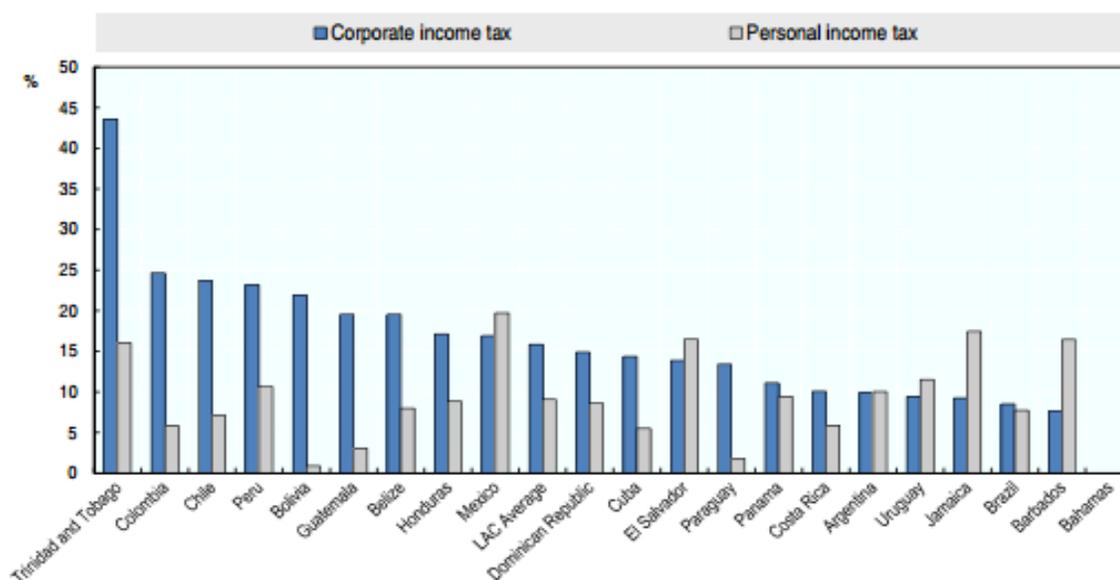


Source: DANE

B. The Impact of the Informal Economy

The informal economy often gets overlooked in Colombia. However, its impacts can be felt in virtually every part of Colombian society. For example, since informal companies are not obliged to follow environmental regulations, they often pollute much more than their formal counterparts. In the same vein, informal entrepreneurs often sidestep labour and health regulations. In doing so, the informal sector often creates significant and direct negative externalities which affect their homes and local community (Webb et al., 2013).

Figure 4- Revenue from Corporate Income Tax and Personal Income Tax as a Proportion of Total Tax Revenue in Select Latin American and Caribbean countries, 2015



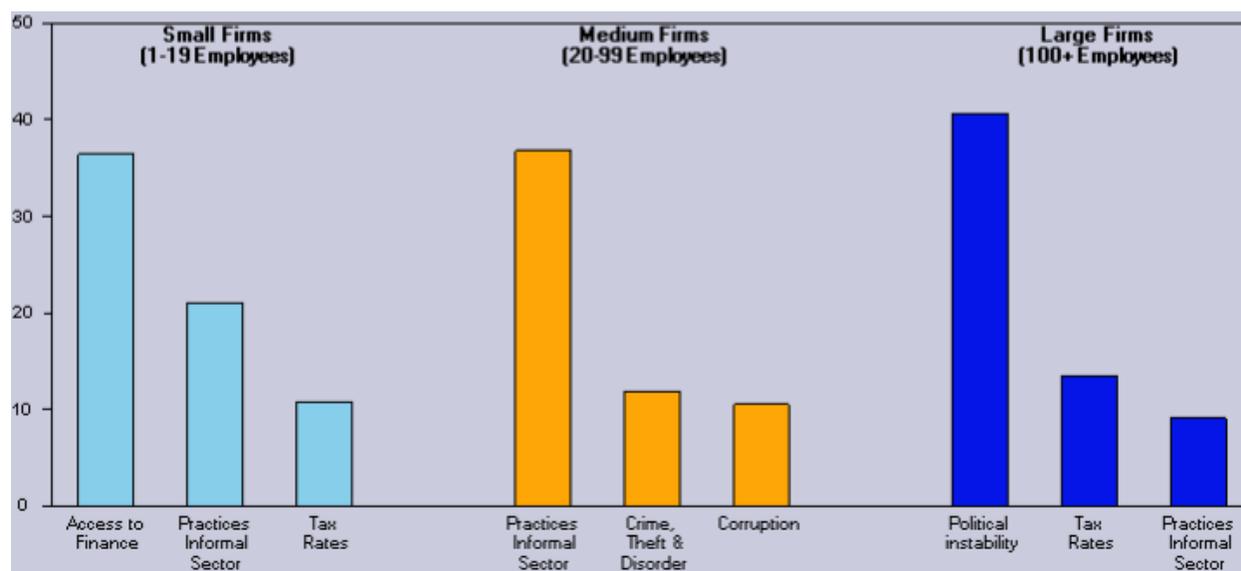
Source: OECD

The loss of tax revenue is another significant impact of the informal economy that is felt throughout Colombian society. Combined with other factors such as corruption and tax evasion, the informal economy leads to lower government revenue, and therefore quality government services such as infrastructure, security, education, and health. In turn, to compensate for the loss

of tax revenue, the government of Colombia places a heavy tax burden on formal firms compared to individuals (see Figure 4). In Colombia, 25% of government revenues came from the corporate income tax, the second highest percentage in Latin America and the Caribbean after Trinidad and Tobago, which relies heavily on revenues from its oil and gas companies (OECD, 2017).

Another damaging consequence of the informal economy is that firms that operate formally have to compete with informal firms that can usually keep their costs lower by avoiding taxes and regulatory constraints. Enterprise Surveys (a World Bank group) sheds light on this issue. After surveying 942 firms from April 2010 to April 2011 in Colombia they found that the practices of the informal sector were the second most important business obstacle for companies with 22.4% of business owners and top managers indicating that it was the **primary obstacle** for their company. This was behind access to finance at 28.8%, and ahead of tax rates at 10%. However, when the survey results are broken down into firm size (as seen in Figure 5), the informal economy is the second most important issue for small firms (1 to 19 employees), the most important issue for medium businesses (20 to 99 employees), and the third for large enterprises (100+ employees).

Figure 5 - Percent of Firms Identifying the Problem as the Main Obstacle, Colombia



Source: Enterprise Surveys

The survey also found that 55.2% of Colombian firms identified practices of competitors in the informal sector as a **major constraint** compared to the Latin American & Caribbean average of 30.6%. Also, 70.9% of Colombian firms indicated that they compete against unregistered informal firms compared to the Latin American and Caribbean average of 62%.

In sum, the informal economy has significant direct and indirect ramifications across Colombia. It produces important economic distortions that reduce government revenues and, in turn, government services. It produces a situation in which the government must place an unfair tax burden on companies, and it compromises the health of workers and the environment

3. Economic Motivations Theory: Cost Versus Benefit

According to the Economic Motivations Theory, individuals are rational calculators who weigh the costs and benefits of being formal versus informal (Schneider, 2015). The decisions of

employers and workers “to partially or completely participate in the informal economy is a choice under uncertainty facing a trade-off between the gains if their activities are not discovered and a loss if discovered and penalized” (Schneider, 2015, p. 231). In other words, the decision to become and remain informal negatively depends on the probability of detection and potential fines, and positively on the opportunity costs of remaining formal. The opportunity costs are positively determined by the tax burden and high labour costs (Schneider, 2015). Therefore, the higher the tax burden and labour costs, the more incentives employers and workers have to avoid these costs by working in the informal economy (Schneider, 2015).

This theory emphasizes the voluntary nature of informality, in which activities can be efficient and profitable (Ferreira, 2016). Thus, for those who support the Economic Motivations Theory, it is not surprising that research has shown that higher taxes increase the size of the informal economy, especially in emerging economies (Webb et al., 2013). In developing countries, such as Colombia, general belief may form among entrepreneurs and workers that it is more efficient to operate in the informal economy because they perceive that the benefits provided by formality are less than the costs (Webb et al., 2013).

Table 2 – Primary Costs and Benefits of Operating in Formal Economy

Cost	Benefit
<i>Taxes (corporate, personal, VAT, etc.)</i>	Easier access to finance and land
<i>Regulations (e.g. environmental, trade, etc.)</i>	Greater potential for firm growth and better wages
<i>Non-wage labour costs</i>	Greater protection of rights and working conditions (workers and firms)

<i>Registration (time and fees)</i>	Greater access to larger markets
	Access to pension and contributive health care

Source: Author's Table

Table 3 – Primary Costs and Benefits of Operating in the Informal Economy

Cost	Benefit
Penalties (fines)	Tax avoidance
More difficult access to finance and land	Non-wage labour cost avoidance
Limited potential for growth	Flexibility and autonomy
Lack of social security coverage	Avoidance of regulations
More challenging working conditions (e.g., working hours, locations, etc....)	

Source: Author's Table

Additionally, in the case of developing countries, tax enforcement is usually weak relative to developed countries. As a result, the risk of facing fines or penalties for participating in the informal sector are insignificant, further increasing the likelihood that an entrepreneur or worker would choose to take part in the informal economy (Webb et al., 2013). For instance, Colombia's tax collection agency, *Dirección de Impuestos y Aduanas Nacionales* (DIAN), only inspects roughly 0.1% of taxpayers due to limited capabilities and personnel, compared to around 3% in other Latin American countries (OECD, 2015). Hence, the combination of high taxes, NWLCs, and minimal risk associated with tax evasion create an environment in which informality can thrive.

The rational decision that is made according to the Economic Motivations Theory can be captured by examining Table 2 and 3. Rational actors weigh these costs and benefits to determine in which sector to operate. In every country, this cost/benefit balance is different and is a major factor in determining the size of the formal and informal sectors.

Proposition: When perceived costs of working in the informal economy are minimal compared to institutional benefits, entrepreneurs and workers are more likely to operate informally

4. Methodology

This work will be conducted as an empirical analysis using a case study approach. Therefore, the goal of this paper will be to expand and generalize a theory, namely the Economics Motivations theory, and thus does not represent a sample (i.e. statistical generalization). In other words, this case study is generalizable to theoretical propositions and not to populations and universes (Yin, 1984). The analysis of the informal economy using the lens of the Economic Motivations theory will also help guide the policy recommendations in this paper.

To conduct this major research project, I will solely use documentation (i.e., scholarly articles and reports). Most of the information retrieved from reports will come from reputable international organizations that offer reliable information on the informal economy including the International Labour Organization (ILO), the Inter-American Development Bank (IBD), the Organization for Economic Co-operation and Development (OECD), and the World Bank (WB).

Because of the precise nature of this work (i.e., corporate taxes and NWLCs in Colombia), scholarly articles related to this research subject are limited in the Colombian context. To find articles related to these subjects the keywords “corporate taxes”, “informal economy”, “non-

wage labour costs” along with “Colombia” were used to search in the University of Ottawa’s online library which searches through multiple scholarly article databases. Once articles deemed to be acceptable were found, a snowballing technique was used to find articles related to the informal economy, corporate taxes, and NWLCs. In addition, as much as possible, scholarly articles and reports published after 2010 are used in this paper to analyze the most recent information.

The focus of the case study will be Colombia’s informal economy, however, in the second half of the paper, I will also contrast Colombia with comparable countries, Ecuador and Brazil. I chose to contrast these countries with Colombia for several reasons. First, I chose these countries because they are both upper-middle income countries like Colombia. More specifically, I chose Ecuador since it is slightly behind Colombia in terms of GDP per capita (\$ 5 366 in constant 2010 US\$, as of 2015) but it has managed to reduce informality quite considerably despite its lower economic output. On the other hand, I selected Brazil because it is ahead with regards to economic development (\$11 211 GDP per capita in constant 2010 US\$, as of 2015). Also, Brazil has similarly high tax rates applied to companies compared to Colombia (68% as a percentage of profit according to Doing Business), but has a lower informality rate, 43.4% in 2012 (ILO, 2014). Second, these countries are similar with regards to their colonial past, with all three having been colonized by countries from the Iberian Peninsula (i.e., Spain and Portugal), and thus have comparable institutions because of their shared history. Third, all three countries are endowed with similar natural resources and geography. In fact, all three have large coastlines, share the Amazon rainforest and have vast amounts of mineral and oil deposits. Therefore, theoretically, policies that have been used in comparable countries to formalize their

economies could be transferable to Colombia since they have similar institutions and resources at their disposal.

5. Defining and Measuring the Informal Economy

A. Defining the Informal Economy

There are several definitions of the informal economy. For instance, according to the ILO informal employment “refers to labour relations that are not subject to the protection obligations established in labour or social regulations, de facto or by law.” However, in this paper I will use Friedrich Schneider’s definition found in his paper entitled “In the Shadow of the State – The Informal Economy and Informal Economy Labour Force”:

The informal economy includes all market-based legal production of goods and services that are deliberately concealed from public authorities for the following reason:

1. to avoid payment of income, value added or other taxes,
2. to avoid payment of social security contributions,
3. to avoid having to meet certain legal labour market standards, such as minimum wages, maximum working hours, safety standards, etc., and
4. to avoid complying with certain administrative obligations, such as completing statistical questionnaires or other administrative forms.

I selected this definition because it captures the essence of the cost/benefit calculations made by those who operate informally. This definition is also in line with the Economic Motivations theory used in this paper.

Regarding quantifying the informal economy, it is worth noting that data on the informal economy are not perfectly comparable since the universal ILO definition and suggested measuring methodology are often adapted to local circumstances. Countries may have differences in data sources, in geographic coverage, in the branches of economic activity

covered, in the criteria used to define the informal sector (e.g., the size of the enterprise or establishment versus non-registration of the enterprise or the worker), in cut-offs used for enterprise size, and inclusion or exclusion of paid domestic workers (ILO, 2014). Nonetheless, despite the imperfect nature of informal employment data employment comparability, comparing the informal data indicators across countries can give us a general idea of the size of each country's informal economy.

It is also important to note that there are two kinds of categorizations for the informal economy. One is informal employment in the formal sector and the other is informal employment in the informal sector. In Latin America as a whole, non-agricultural informal employment is unsurprisingly concentrated in informal employment in the informal sector which stood at 31% in 2012 compared to 11.6% informal employment in the formal sector in the same period (ILO, 2014). In this paper, the mentioning of the informal economy will refer to both these categories together.

B. Measuring the Informal Economy in Colombia

Colombia's National Department of Statistics (DANE) measures follow ILO guidelines and defines informal employment characteristics as the following:

1. Employees and workers that work in firms that employ up to five people in all of its locations;
2. Unpaid family workers;
3. Unpaid workers in companies or businesses of other households;
4. Domestic workers;
5. Day labourers or farmhands
6. Independent workers that work in businesses of up to five people, except professional independent workers;
7. Bosses or employers in companies of five workers or less;
8. Workers and employees of the government are excluded.

Therefore, DANE uses a definition and measures the informal sector using firm size and occupation. DANE also uses an alternate measurement, that of the percentage of workers contributing to pensions (since all formal sector workers are required to make contributions to Colombia`s national pension system).

C. The Criminal Economy: The Colombian Drug Trade

It is important to note that the criminal economy which produces illegal goods and services (e.g., production and distribution of drugs) is not included in informal employment figures in line with ILO guidelines. Nevertheless, understanding the size of the criminal economy in Colombia is important since it has effects on formal and informal employment. Although the export of drugs, (in particular, cocaine) has long been associated with Colombia, there has been a significant reduction in the production of coca leaves and cocaine in Colombia in recent years. In fact, at its height in the 1980s, the production and distribution of illicit drugs were estimated to represent around 7% of Colombian GDP and 70% of exports (Steiner, 1998). In 1995, in large part due to an international effort to combat drugs in the country, production and distribution of drugs were estimated at 3% of GDP and 25% of exports, around the same amount of revenue generated from coffee sales at the time (Steiner, 1998). While the revenues from illicit drug sales concentrated in the hands of a few, the sale of coffee beans generated income for an estimated 300 000 Colombian families in the early 1990s (Steiner, 1998).

In 2008, Colombia cocaine production and trafficking produced around US\$ 7.5 billion or 2.3% of the country`s GDP and in 2013 sales further diminished to an estimated US\$ 4.5 billion (Mejia, 2016). Also, from 2000 to 2013, Colombia succeeded in reducing coca cultivation from an estimated 160,000 hectares to 48,000 hectares (Mejia, 2016). However, this number rose to roughly 96 000 hectares in 2015, according to a joint survey by the Government of Colombia

and the United Nations Office on Drugs and Crime (UNODC). The same survey showed that five of Colombia's 23 departments affected by coca crops, Cauca (population 1.3 million), Nariño (population 1.7 million), Putumayo (population 337 thousand), Caquetá (population 465 thousand), and Norte de Santander (population 1.3 million), comprised 81% of the coca crop area. Therefore, it appears that the criminal drug economy is concentrated in very few rural regions of Colombia and generates revenues for only an extremely small fraction of Colombia's workforce. As a result, it can be said that currently, the drug trade currently has a very limited effect on the informal and formal economies in terms of distorting the labour supply and demand markets.

6. Case Studies: Informal Employment in Brazil and Ecuador

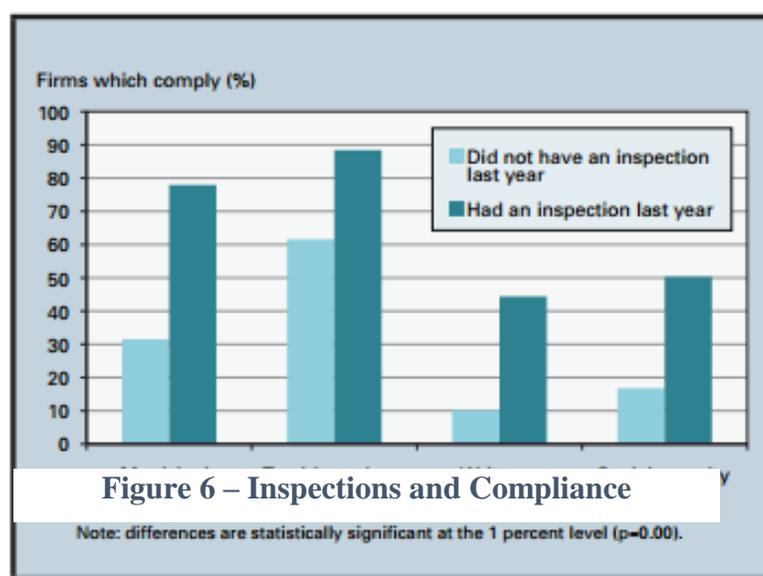
Before looking at possible policy options for Colombia related to the decrease of informal employment it is important to look at what other countries have done and to draw lessons from their experiences.

A. Ecuador

Colombia's neighbour, Ecuador, reduced its informality rate from 45.1% in December of 2010 to 39.3% in June of 2015 according to Ecuador's department of statistics, INEC. However, the progress made over those five years were erased over the span of fewer than two years. In fact, the informal employment rate stood at 45.6% in March of 2017 according to INEC. These changes could partly be explained by the dramatic rise in underemployment in Ecuador since 2015, which stood at 21.4% in March 2017 (INEC). Nonetheless, lessons can still be learned from Ecuador's policies designed to formalize the economy, which were partly responsible for the downwards trend for more than a decade before the recent rise in informality.

Ecuador has stepped up enforcement over the past decade to reduce informality and tax evasion, thereby increasing the perceived cost of informality. For instance, in May 2011, the Government of Ecuador held a referendum on several issues, including whether failing to affiliate workers with social security (IESS) could be considered a criminal offense, which was subsequently approved by Ecuadorians. Following the referendum, the rate of social security affiliations of employees (as a share of the labour force) rose from 33.1% in December 2010 to 37.9% in December 2010, even though the criminal code had not yet been modified based on referendum results (World Bank, 2012). This increase was partly due to a decline in the unemployment rate during the same period, however, even when unemployment is taken into account, the number of affiliated workers as a share of the employed population rose from 35.2% to 39.8% (World Bank, 2012). Although it would be difficult to attribute the entire increase to a legislative change that had yet come into effect, the signal sent by the authorities regarding the seriousness of the issue had probably contributed to the increase in affiliation (World Bank, 2012). Other reasons for the increase likely included recent changes allowing for affiliation of part-time employees, some relaxations of the rules requiring a minimum period of continuous employment before benefits can be drawn, and the ability to use medical benefits in both public and private clinics (World Bank, 2012). In February 2014, Ecuador's National Assembly issued the Comprehensive Criminal Code, which defined in three articles the criminal offense for not providing IESS coverage. The punishments include hefty fines and jail sentences.

Ecuador also launched the restructuring and strengthening of



labour inspection offices in 2009. It involved encouraging the retirement of long-serving inspectors, the hiring on new ones and salary increases (ILO, 2014). The number of inspectors rose from 65 in 2006 to 245 in 2011 (ILO, 2014). Furthermore, inspection offices were changed from a passive model that received complaints to an active model with a plan for inspections nationwide through seven regional directorates (ILO, 2014).

Research from Ecuador has demonstrated that the increased inspections conducted of firms can provide a significant incentive for firms to formalize their activities and comply with labour regulations. In fact, the Ecuador Micro-Enterprise Survey, conducted in 2011, surveyed 1 222 firms in urban areas of Ecuador. The survey found that firms which were inspected in the year previous to the survey were much more likely to comply with labour, social security and tax regulations than firms that did not receive an inspection in the previous year (see Figure 6) (World Bank, 2012).

The survey also found that a number of state-sponsored support programs are

Source: World Bank

available in Ecuador, but few enterprises surveyed participate in them (see Table 4). 78% of the firms were familiar with at least one of the 11 state-sponsored programs mentioned in the study, although awareness varies significantly by program, ranging from 6% to 62% (World Bank, 2012). However, among these firms, just 11% participated in at least one program (World Bank, 2012). Interestingly, 89% of surveyed firms indicated they would be interested in learning more about these same programs (World Bank, 2012). These results suggest that perhaps the low uptake is due to lack of dissemination of information related to the programs.

Table 4 - Knowledge of and participation in state support programs for entrepreneurs

	Aware of (% of firms)	Participate (% of firms)
Emprende Ecuador ^a	18.43	2.22
Innova Ecuador ^a	12.2	0.67
Fondepyme ^b	5.9	1.39
Plan Ren-ova ^b	26.78	4.28
Negocios Turísticos Productivos (Ministerio de Turismo)	17.44	6.57
Crédito para Economía Social y Solidaria ^c	13.27	1.85
Crédito Socio Panadero ^c	14.41	0.00
Microfinanzas Juveniles ^c	6.06	1.35
Crédito de Desarrollo Humano ^c	39.48	2.90
Créditos Productivos (Banco Nacional de Fomento)	61.75	5.84
Créditos Productivos (Corporación Financiera Nacional)	40.38	4.67

Source: World Bank Note: Participation rates are calculated only for those firms who are aware of the respective programs

Two key lessons can be taken from Ecuador:

1. The increasing government inspections on companies can have a significant impact on compliance with labour laws since it increases the cost of informality in relation to formality. On the other hand, compliance is generally much lower for companies that do not receive recent government inspections because their perception of risk (i.e., receiving a fine or jail time for instance) is low.
2. Having government-sponsored programs is a helpful tool in increasing the formality rate by decreasing the costs of formality. However, simply having government-sponsored programs is not sufficient. Governments should take more time to study the needs of their small and medium businesses which are the heart of their economy. For instance, governments can conduct surveys to discover what such firms need to grow and formalize. Moreover, the case

of Ecuador showed that making firms aware of government-sponsored programs is just as important in designing programs themselves.

B. Brazil

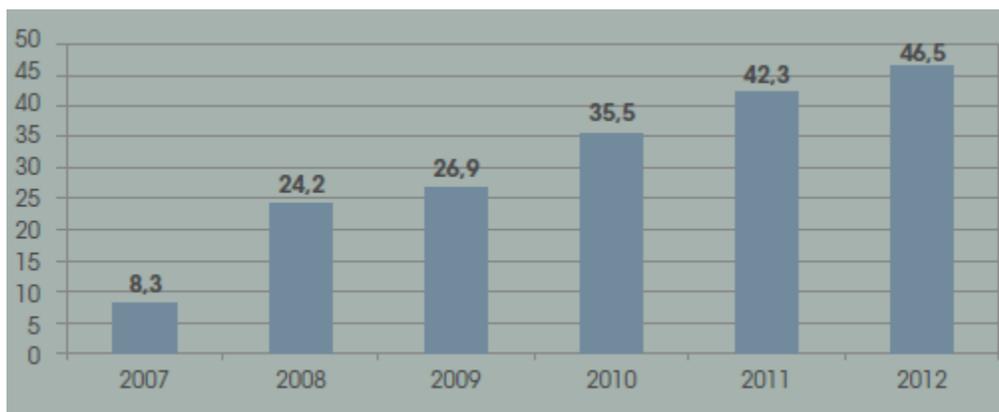
Brazil saw its informality rate decrease from 53.3% in 2002 to 43.4% in 2012, representing a 10.1% increase in the size of the formal sector in just ten years (ILO, 2014). Some of this decrease in informality can be attributed to the impressive economic growth that Brazil witnessed for a decade, but the Brazilian government also experimented with several policies aimed at curbing its high informality rates. For instance, in 1996 the Brazilian government passed the Simples Federal Law which simplified tax regulation for micro and small enterprises by creating an integrated system for the payment of tax and social security contributions (ILO, 2014). The main objective of SIMPLES Federal was to improve the competitiveness of micro firms, by reducing costs and stimulating formalization (ILO, 2014). This law allowed for the unification of five different federal taxes plus the employer's contribution to social security into a single payment (ILO, 2014). Therefore, the program promoted a sizeable reduction in tax burden and reduced red tape involved in tax payments which allowed firms to bypass the lengthy and complex procedures that increased the cost of being formal (Monteiro and Assuncao, 2011). However, the program was found to have little to no impact on business formalization since taxes associated with operating in the formal sector remained costly despite the reform (Monteiro and Assuncao, 2011).

In 2007, the Brazilian government tried to improve upon Simples Federal and created Simples Nacional which further reduced bureaucracy, combining eight different taxes applied to small

firms into a single payment (ILO, 2014). Companies eligible for the program are micro businesses with gross annual income of up to 360 000 Brazilian Reals, and small businesses with gross annual income ranging from 360 000 Brazilian Reals to 3 600 000 Brazilian Reals. Until the implementation of Simples Nacional, companies had to present their tax declarations to the federal, state, and municipal governments with a monthly payment which varied according to economic activity (ILO, 2014). The implementation of this program required the cooperation between states and municipalities, which under the previous Simples Federal program continued to tax movement of merchandise and services, interstate and intermunicipal transport and communication services, and other services (ILO, 2014). Also, Simples Nacional exempts micro and small enterprises from paying additional social contributions required at the federal level and reduces other fiscal obligations (ILO, 2014).

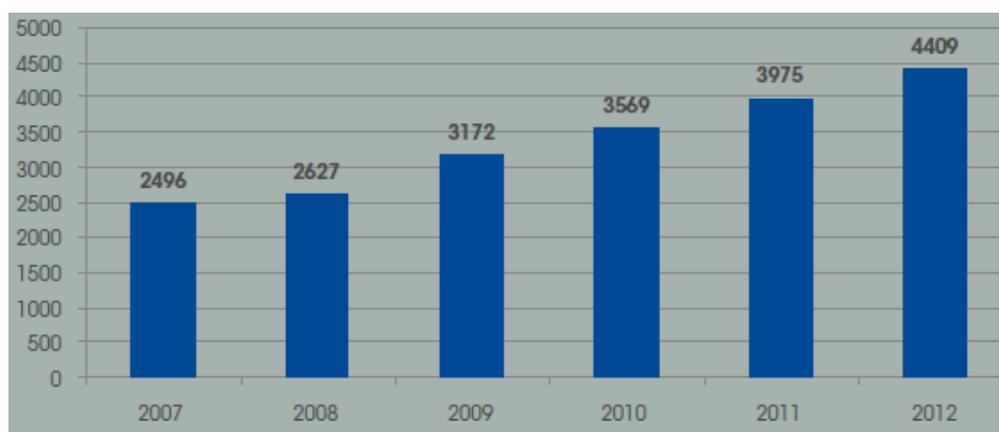
A significant advantage of Simples Nacional is that it reduces the amount of taxes paid by small firms, as well as their accounting. Most micro and small firms that opted for the program saw their tax contributions reduced by 20% to 50%, depending on the type of economic activity performed and levels of sales (ILO, 2014). By 2012, more than four million micro and small enterprises had opted for Simples Nacional and research showed that there was an increase in income and employment among registered companies (ILO, 2014). Also, companies participating in Simples Nacional were carrying out more permanent and capital intensive operations (ILO, 2014).

Figure 7 – Total Tax Revenues Under Simples Nacional, 2007-2012 (Billions of Brazilian Reals)



Source: ILO

Figure 8 - Number of Micro and Small Enterprises Registered with Simples Nacional, 2007-2012 (Thousands)



Source: ILO

The tax revenues collected from Simples Nacional grew at rates well above other taxes and was three times higher than the real growth rate of entire revenue collection (Paes, 2014). In fact, tax revenue under Simples Nacional grew from 8.3 billion reals in 2007 to 46.5 billion reals in 2012 (see Figure 7) and firms registered with Simples Nacional increased from roughly 2.5 million businesses in 2007 to 4.4 million firms in 2012 (see Figure 8).

Two main lessons can be taken from Brazil:

1. Initially, the benefits from the Simples Federal was not enough to make firms enter the formal economy. As with Law 1429 in Colombia, firms were likely not provided with enough incentives to begin operating in the formal economy and chose instead to remain in the informal sector. However, when the Brazilian government redesigned the program and created Simples Nacional, it provided enterprises with enough benefits to significantly increase formalization. The Simples Nacional program shows that reducing the costs of being formal can have significant positive effects on the degree of formality.
2. Reducing the costs of doing business for small and medium firms can have adverse effects on government revenues in the short-run since many developing countries depend highly on tax revenue generated from these companies. However, in the long-run, such policies can pay off by increasing economic activity and productivity by allowing businesses to have more financial resources to spend on capital and labour. As more companies take advantage of the lower costs of doing business and formalize, tax revenue is increased over the long-run and informality can be slowly reduced.

7. Analysis

The analysis in this paper will be centered around the research questions posed in the introduction. The responses to these questions are based on the data and information examined in the previous sections of this major research project. The analysis provided in this chapter will help inform the policy recommendations in the following section.

1. Do Colombians tend work in the informal sector out of necessity or choice?

This question is difficult to answer since no research directly studies the issue. However, the question can be answered based on deduction from different measures found in this paper. It is evident from the studies conducted in Cali and Bogota that those working in the informal economy, on average, have lower levels of education. Their low levels of education mean that if they were to work in the formal economy, they would likely earn the minimum wage. With that being said, since the universal minimum wage is binding in many parts of Colombia, many low-skilled workers are excluded from the formal sector.

If we are to believe the Minimum Wage theory described earlier in this paper, however, we can observe that only a portion of the labour supply is left unemployed in the presence of a binding minimum wage. Thus, the fraction of workers left unemployed from the binding minimum wage must find informal employment or remain unemployed. These results suggest that a portion of Colombian workers work in the informal sector out of necessity since they cannot find employment because of the binding minimum wage.

On the other hand, the study conducted in Bucaramanga showed that the most popular way of working for those surveyed was in a fixed establishment (where earnings are higher) and that, on average, informal workers earned between one and two minimum monthly wages. Similarly, in Cali, the street vendors surveyed, on average, earned more than the minimum wage. Other interesting findings from the Martinez et al., (2017) Cali informal sector survey include:

- 93% would not sell their business in the near future.
- Only 18% planned to get a formal job.
- The commonly cited primary advantages are independence (46%), good income (17%), and no boss (10%).
- Street vendors were asked under which conditions they would accept a formal job. 31% said they would accept if wages were higher than their current job, 15% would take the minimum wage if it included social security and better working conditions, and only 5.5% would accept a salary equal to their average profit.

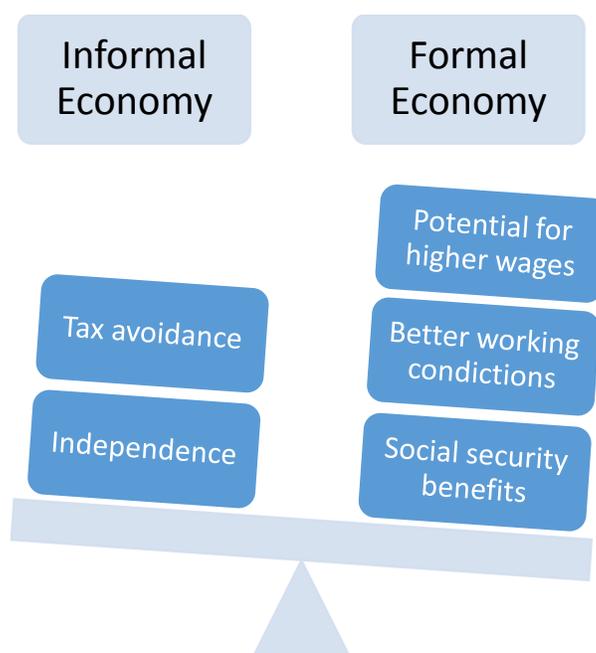
Hence, although a significant portion of Colombian workers is unwillingly excluded from the formal sector, it appears that most Colombian workers choose to work informally because of higher or similar profits (even if they are usually required to work longer hours) and greater independence relative to the formal sector, among other perceived advantages. Indeed, most Colombians that work in the informal sector seem to be driven by the cost-benefit analysis (choice) rather than out of necessity.

2. Why should the Colombian government seek to decrease the size of the informal economy?

The informal economy of Colombia offers a way to make a living for a little less than half of Colombia's population. Therefore, the informal sector is essential for the Colombian economy by allowing millions of workers to earn a wage lawfully. It can be seen as a tool to help fight poverty and crime. Additionally, the informal economy can work as a buffer that allows those excluded by the formal economy to find employment and provide for themselves and their families. Hence, most of the informal economy should not be vilified. These benefits of the informal economy are more than likely recognized by the Colombian government which is why they are reluctant to punish those who operate in the informal economy, especially street vendors.

Despite all the benefits derived from the informal economy, the informal sector can have significant negative impacts on formal Colombian businesses, overall economic productivity, tax collection, the environment, and the wellbeing of workers. Indeed, there are many benefits to the informal economy but the drawbacks can be quite significant and can adversely affect the entire social and economic prosperity of the country.

Figure 9 – Tradeoffs Between Formal and Informal Economies



Source: Author's Figure

Currently, operating in the informal economy is perceived to be more advantageous for the poorer portion of the Colombian population. Because of this, the government of Colombia should find a way to reshape the balance between the formal and informal economy so that it favours the formal sector (see Figure 9). This would involve increasing the benefits and reducing the costs of operating in the formal economy as well as increasing the cost of operating in the informal economy (more on this in the Policy Recommendation section). The policies do not need to be drastic as those working in the informal sector need time to adapt and gradually shift to the formal sector.

Colombia has already had success in reducing its informal employment rate in recent years. This achievement is most likely due to a combination of economic growth (to a larger extent), and government policies aimed at combating the informal economy (to a lesser extent). In fact, as the

economy grows, companies operating in the formal get larger and hire more employees and new formal sector enterprises are also created. Also, because of economic growth, some firms working in the informal sector decide to join the formal sector since they see an increased potential for profit despite the high corporate taxes and NWLCs. Yet, even with economic growth, the process of the formalization of the Colombian economy has been quite slow because of the significant deterrence of high corporate taxes and NWLCs.

3. What are comparable countries, Brazil and Ecuador, doing to successfully formalize their economies?

As seen in the previous section, Brazil and Ecuador experimented with different policy options which targeted the reduction of the informal sector. Brazil and Ecuador managed to reduce their informal employment rates by different means. However, what their policies had in common was that they reduced the costs of formality and in the case of Ecuador, increased the costs of informality by increasing government inspections and increased resources for its tax administration. If these policies were to be analyzed through the Economic Motivations theory, one could argue that these policies were effective since they affected the cost-benefit analysis made by those thinking about whether to operate formally or informally.

Ecuador and Brazil acted in the right way by concentrating more on increasing the benefits and lowering the costs of operating in the formal sector and less on punishing those in the informal sector. Indeed, governments in developing countries must be careful with regards to the penalties imposed on firms and individuals working in the informal sector since they are a major part of the economy and provide governments with considerable indirect tax revenue, especially in VAT. As did the Government of Ecuador, governments should target, inspect, and penalize, fixed formal and informal establishments to ensure that they comply with labour and tax laws.

Fixed informal establishments or fixed formal establishments that employ workers informally are more likely to operate informally by choice rather than necessity and should therefore face considerable penalties if their activities are caught by government officials. Mobile street vendors, which make up a large segment of the informal economy, should not be targeted by state inspectors as this would be too time and resource consuming and would draw significant criticism from the population, as many of these workers operate in the informal sector out of necessity rather than choice.

4. What is the Political Feasibility of Corporate Tax and NWLCs Reforms?

Now that the economic side of the question has been explored, it is important to look at the political feasibility of corporate tax and NWLCs reform. With regards to international organizations, it is safe to say that they would support plans that Colombia would have to reduce the statutory corporate tax rate and NWLCs. For instance, in a meeting between Colombian officials and the IMF Executive Board on May 1st 2017, the Directors of the Executive Board in its assessment of Colombia`s economy stated that they:

welcomed the structural tax reform approved last year, which will help finance key social and infrastructure programs while adhering to the fiscal rule. They concurred that reduced corporate taxation and the overall simplification of the tax system will improve competitiveness. The Directors also noted that continued efforts on tax administration will be essential to achieve the target revenue yield. (IMF, 2017)

Similarly, the OECD, as this paper has shown is a strong advocate for the lowering certain tax rates in Colombia including the corporate tax rate. In sum, they argue that “future tax reform must address Colombia`s high tax rates on corporate profits, value-added tax, on investment goods and the net wealth tax, all of which combine to penalize investment (OECD, 2015).” With regards to NWLCs the OECD stated that “labour market reforms to reduce non-wage labour

costs and to allow for more flexibility in minimum wage determination would encourage formal employment and boost labour productivity (OECD, 2015).”

Regarding national political feasibility, it is likely that proposals for considerable corporate tax rate and NWLCs reform would face heavy resistance from the Colombian government in large part due to the short-term loss of tax revenue. This is evident because of the 2016 tax reform, in which the Colombian government was unwilling to lower the corporate tax rate below 33%. Thus, for any such proposals to be accepted by the Colombian government, it would be essential to demonstrate how the government could make up for loss tax revenues by looking for revenue in other sources.

On the other hand, it is likely that the general Colombian population would support such reductions as it would most likely decrease unemployment. Additionally, the business community would certainly support the reforms since it would increase their income and would allow them to expand their businesses much more easily.

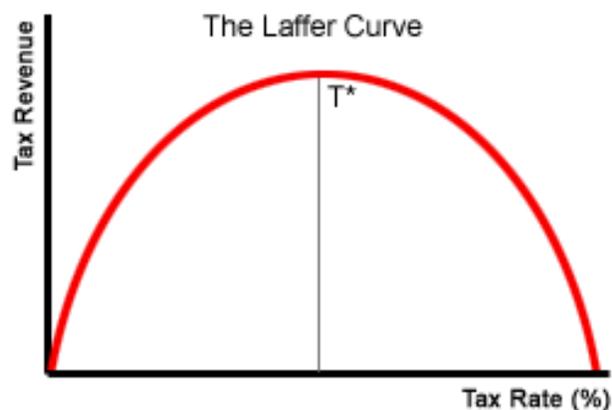
8. Policy Options for Colombia

The policy recommendations in this section will be based on the analysis provided in the previous chapter. As this paper has shown, the reduction of informality is ultimately determined by the trade-offs of the formal and informal economies. Public policy can help reduce informal employment by lowering the costs of formalization, amplifying its benefits, and strengthening enforcement (World Bank, 2012).

A. Corporate Tax Reform

Figure 10 – Laffer Curve

With regards to corporate taxes, the Colombian government should implement a tax rate close to the revenue maximizing rate based on the Laffer Curve theory. The Laffer Curve suggests that when a government increases taxes, government revenue also



increases up to a certain point (T* in Figure *Source: Investopedia*

10). If the tax rate is increased beyond this

optimal point, government revenues start to decrease as workers and firms start avoiding taxes and working informally. Determining what the revenue maximizing rate is not an exact science and can be challenging. However, economists can estimate what this rate is and afterwards the government can adjust the rate based on the tax revenues earned.

At 34%, the statutory tax rate of Colombia is located somewhere to the right side of the Laffer curve. The Colombian government most likely feels like it must overtax corporations to make up for the lack of revenue from the personal income tax. Ironically, personal income tax collection is low in Colombia in large part because of the high tax burden placed on firms, creating a vicious cycle of low tax revenue for the government and high rates of informality.

Lowering the corporate tax rate would stimulate investment, especially in activities with narrower profit margins than the commodity sector (Daude et al., 2015). However, the short-term revenue costs of lowering the corporate income tax are significant

Figure 11- Personal Income Tax Revenue as % of GDP 2012

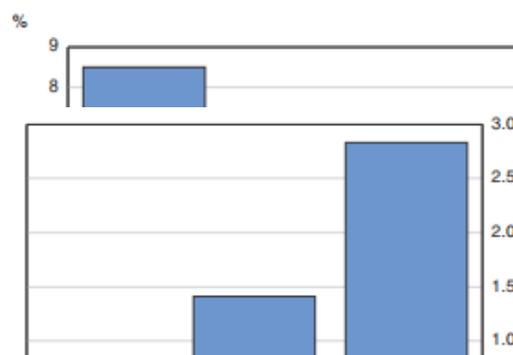


Figure 12 – Income Level Threshold to Start Paying Personal Income Tax (as Ratio of National per Capita 2010)

and benefits regarding investment and FDI would only arise in the long-run, which suggests that a gradual decrease in the statutory rate would be more desirable (Daude et al., 2015).

If the corporate tax rate were to be lowered, the Government of Colombia would most likely have to compensate for its lost short-term revenues by increasing tax revenues from other areas. One main priority should be increasing the revenues generated from the personal income tax. In 2012, the personal income tax accounted for only 0.8% of Colombia's GDP, below both OECD and Latin American averages (see Figure 11).

Moreover, the minimum exemption level for personal income taxes is relatively high. In fact, while in OECD countries individuals, on average,

begin Latin American countries start paying personal Source: OECD income tax starting at around one and a half times the national per capita income, in Colombia the threshold is three times the average national per capita income (see Figure 12) (OECD, 2015). As a result, less than 10% of the population have to present a tax declaration and only around 5% pay personal income taxes (OECD, 2015).

Part of this problem could be resolved by lowering the corporate tax rate which would create more jobs and entice firms to formalize. However, the reduction of the tax burden on businesses would have to be complemented with increased enforcement by the DIAN to reduce tax evasion, which accounts for 2 to 4% of GDP (OECD, 2015). While part of the elevated levels of evasion reflects the overall high informality of the economy, it is also explained by some institutional weaknesses in the tax and customs administration (Daude, Perret, and Brys, 2015). In particular, a large share of VAT evasion occurs due to weak border and customs controls, personnel constraints, regulations, and segmented information systems (Daude et al., 2015).

B. Strengthening the Tax Administration and Increasing Taxpayer Inspections

Improving the DIAN would help reduce tax evasion. As mentioned earlier in this paper, the DIAN inspects only 0.1% of taxpayers compared to about 3% in other Latin American countries and it is estimated that the tax evasion rates for corporate taxes were, on average, 30% over the 2007-2011 period (Daude et al., 2015). However, it is estimated that personal income tax evasion is even more pervasive than VAT or corporate income tax evasion (Daude, et al., 2015). It is also estimated that Colombian elites hide the equivalent of one quarter of the countries GDP in tax havens according to former DIAN director, Juan Ricardo Ortega. These high rates of tax evasion are in part a consequence of the DIAN's relatively small staff (Daude et al., 2015). In fact, there are also less than half the employees in the DIAN per person than in Mexico (see Figure 13). As the case study on Ecuador demonstrated, inspecting firms and taxpayers just once a year can have a significant impact on compliance with tax payments and labour regulations. Thus, inspections should become a priority for the Colombian government.

Moreover, the use of information technologies (IT) and mass audits is also lacking in Colombia which is reflected in the relatively small IT expenditures compared to other countries (see Figure 14) (Daude et al., 2015). A greater use of IT would simplify tax administration and enforcement, as well as lower the compliance cost for taxpayers (Daude et al., 2015).

In addition to strengthening the DIAN and its capabilities, the Government of Colombia

Figure 13 – Citizens per Tax Employee 2012

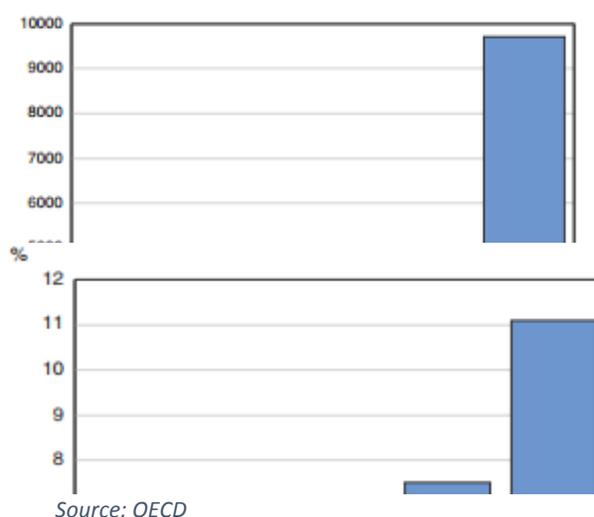


Figure 14 – Total IT Expenditures (% of Total Revenue Body Expenditure) 2012

Source: OECD

should look into applying stiffer penalties on taxpayers. In December 2016, Colombia moved in the right direction by approving Law 1819, a structural tax reform primarily aimed at increasing tax revenues. Law 1819 addresses tax evasion by criminalizing it with up to nine years in jail for those found guilty. Before the passing of the law, Colombia was one of the few countries in the world where tax evasion was not a criminal offense. Yet, the stiffer penalties on their own will probably not discourage those who choose to evade taxes as they still see the chances of getting caught by the government as small due to the lack of government inspections on taxpayers. Hence, it is essential for the Colombian government to increase inspections to have any effect of informality and tax evasion.

C. Minimum Wage Reform

The Government of Colombia should also look at modifying minimum wage laws since the minimum wage in is high relative to Colombia's productivity level. In particular, the Colombian government could allow each of its departments to set its own minimum wage in a manner that better reflects their individual productivity levels and cost of living, as opposed to the current system which applies a universal minimum wage across the country and which increases yearly (see Table 5). These annual increases in the minimum wage are negotiated between trade unions and employer's guilds, under government supervision and are agreed upon consideration of several variables such as inflation, productivity increases, workers and companies' needs and general characteristics of the economy among others (ILO, 2013).

The minimum wage may not be binding in main cities like Bogota, Cali, Cartagena, or Medellin but it is often binding in smaller cities and rural areas where productivity tends to be lower. Thus, allowing each of Colombia's 32 departments to set their minimum wage closer to the equilibrium wage could reduce informality as well as reduce unemployment.

Table 5 – Minimum Wage Colombia 2000-2017

Year	Minimum Montly Wage (Colombian Pesos)	Annual Variation (%)
2000	260,100	10%
2001	286,000	10%
2002	309,000	8%
2003	332,000	7.40%
2004	358,000	7.80%
2005	381,000	6.60%
2006	408,000	6.90%
2007	443,700	6.30%
2008	461,000	6.40%
2009	496,900	7.70%
2010	515,000	3.60%
2011	535,600	4%
2012	566,700	5.80%
2013	589,500	4.02%
2014	616,000	4.50%
2015	644,350	4.60%
2016	689,455	7%
2017	737,717	7%

Source: DANE

D. Lowering Non-Wage Labour Costs

Allowing each region to control its minimum wage should be complemented by a general reduction in NWLCs since they compound the effects of the high minimum wage on formal employment (Joumard, and Velez, 2013). Despite the slight decrease originating from the 2012 tax reform, a further reduction in NWLCs would be needed to lower the costs of becoming formal. An additional NWLCs reform would most likely reduce the size of the informal economy since the cost of hiring would be decreased. Also, a further NWLC reduction would allow the formal sector to better adjust to economic cycles. Currently, because of the high NWLC and binding minimum wage, the formal sector must adapt to the economic cycle through

quantities rather than wages, cutting back on mostly low-skilled jobs and forcing many of those workers into the informal sector (Mondragon et al., 2010).

In addition, the impact of the payroll tax on formal employment in Colombia is twofold because of the weak linkages between benefits and social security contributions (Lora, and Fajardo-Gonzalez, 2016). Some social security contributions are earmarked for benefits associated with those who contribute as formal sector employees such as pensions and unemployment benefits (Joumard, and Lodono, 2013). Other social security benefits, however, are available to all citizens, whether they contribute or not (e.g. childcare and training services) (Joumard, and Londono, 2013). The reliance on social security contributions to finance universal health care also creates strong incentives to stay in the informal sector (Joumard, and Londono, 2013). While the non-contributive system had been less generous than the contributive system, the two systems have converged following a 2008 Constitutional Court Ruling (Joumard, and Londono, 2013). Furthermore, the subsidized system covers every member of an eligible household, regardless of the relationship with the household head which provides large families with a further incentive to remain in the informal sector (Joumard, and Londono, 2013). Also, workers who join the formal economy and subsequently lose their jobs may find it difficult to regain access to the subsidized system (Joumard, and Londono). As a result, social security policies designed to protect workers might be worsening working conditions (Mondragon et al., 2010). Therefore, in addition to lowering NWLCs, the Government of Colombia could explore easing the transition from the informal to the formal sector with regards to social security benefits, including simplifying the process of returning to the subsidized system if one loses their job.

E. Sequencing of Policy Recommendation Implementation

The order in which these policy recommendations are implemented is also critical. For instance, if the Colombian government were to implement these policy options at once, there would be a major subsequent shortfall in state revenues. Thus, one scenario could entail first reinforcing Colombia's tax administration. Colombia could see its state revenues increase substantially simply by improving and modernizing its tax and labour regulation. At the same time the Colombian government could decentralize the setting of the minimum wage and allow its 32 departments to set their own minimum wage. This would further increase government revenues as firms begin hiring more workers formally and would likely reduce unemployment. Once these policies are implemented, the statutory corporate tax rate could be gradually reduced until the desired rate is reached. By doing so, the loss of corporate tax revenues is minimized and it leaves time for firms and the government to adapt to the decreasing rate. After gradually reaching the desired corporate tax rate, the Colombian government could gradually decrease NWLCs and seek to fund social welfare programs through other means, such as the personal income tax which should generate more revenue for the government if the aforementioned policies are implemented.

Summary of Primary Policy Recommendations		
Policy Recommendations	Reasoning	Probable Effects
Lower the statutory corporate tax rate	The current statutory corporate tax rate is too high and leads to more firms choosing to operate in the informal sector. Because of	Reducing the statutory tax rate would most likely reduce the size of the informal economy in the long-run as firms see increasing benefits to operating in the informal sector.

	<p>this, the statutory corporate tax rate should be lowered.</p>	<p>Government revenues from the corporate tax would fall in short-run but increase in the long-run as more companies enter the formal economy (due to lower costs) and firms that previously operated in the informal sector choose to formalize.</p>
<p>Strengthen the Colombian tax administration (DIAN)</p>	<p>The Colombian tax authorities inspects relatively few companies and taxpayers. This, in turn, provides firms and individuals with an incentive to evade taxes and/or operate in the informal economy as they perceive the risk of being caught and punished as minimal.</p>	<p>Increasing the inspection capacities of the Colombian tax administration would increase the perceived costs operating in the informal economy. In turn, firms and individuals would be more inclined to join the formal sector based on their costs versus benefits calculations. The increased compliance derived from this policy option could make up for the short-run loss in government revenues associated with the lowering of the corporate tax rate.</p>
<p>Reforming the minimum wage</p>	<p>The current national minimum wage policy is distortive since it is binding in many low-productivity</p>	<p>The suggested minimum wage reform would most likely lower unemployment and informal employment in Colombia by lowering labour costs for firms to a</p>

	<p>regions of Colombia.</p> <p>Therefore, each Colombian department should be able to set their own minimum wage to better reflect their productivity levels and cost of living.</p>	<p>level that is more in line with regional productivity.</p>
<p>Lowering NWLCs</p>	<p>NWLCs, as the relatively high statutory corporate taxes, greatly increase the cost of formally doing business for firms in Colombia, and therefore have a significant impact on informal employment.</p>	<p>Lowering NWLCs would almost certainly reduce unemployment and informal employment by lowering the cost of operating in the formal economy for both firms and individuals who must contribute. The government of Colombia would have to find alternative sources of funding for its social welfare programs. One possibility would be to gradually lower NWLCs a few years after having implemented the other three policy options. The increased long-term tax revenue generated from these policy options could help pay for social welfare programs.</p>

Conclusion

This major research project examined the impact of corporate taxes and NWLCs on the informal economy in Colombia. Using the Economic Motivations theory as the theoretical framework, it became evident that the relatively large size of the informal sector in Colombia was primarily due to the cost/benefit analysis conducted by both workers and firms. Informality in many regions of Colombia can become the favoured option since employees and businesses consider that the cost of taxes and social NWLCs do not provide enough benefits relative to their costs. Since tax inspections are rare and penalties for operating informally are minimal, workers and firms are provided with further incentives to avoid the formal sector.

With regards to firms, the high NWLCs and corporate taxes increase the cost of becoming formal. Because of this, many firms choose to avoid entering the formal economy to avoid

paying these taxes as well as other taxes in fees including the VAT. On the other hand, many workers (especially low-skilled workers) who earn the minimum wage (or close to it) often choose to avoid the formal sector to escape social security contributions for which they do not see much value since many of them are covered by the subsidized health regime as well as other benefits received by the poorer segment of the Colombian population.

Policies aimed at combating the informal economy in Brazil and Ecuador were examined to draw lessons from their experiences. In the case of Ecuador, it was found that increasing government inspections on firms has a significant impact on compliance with labour and tax laws. In addition, it was found that simply having government sponsored programs to help small and medium firms formalize and thrive is not enough. Governments can help firms become aware of the options at their disposal as well as their benefits. In the case of Brazil, it was shown that policies designed to reduce costs for small firms, in this case lowering corporate tax rates, do not always translate to increases in formality. The net benefits of being formal need to exceed the net benefits of operating informally, which could entail further lowering costs incurred by firms. Also, reducing the tax rates applied to small and medium firms can be costly in the short-run, however, if the policy is well designed governments can increase their revenues, in the long run, all while increasing formality rates.

Based on the information and data examined in this paper, it is recommended that Colombia lowers its statutory corporate tax rate from 34% to somewhere closer to the revenue maximizing rate based on the Laffer Curve theory. It is also recommended that Colombia reduces its NWLCs to reduce the costs of hiring labour. At the same time, a reduction in NWLCs would allow firms to be in better position to handle economic cycles. However, these policies on their own would not likely be enough to reduce informality as quickly as desired. The aforementioned policy

recommendations would be most effective if complemented with a minimum wage reform that would allow each Colombian department to set its own minimum wage based on factors such as cost of living and productivity. This policy option would be essential since the current universal minimum wage is binding in many regions of Colombia. Furthermore, increasing resources for the Colombia's tax administration, DIAN, as well as increasing government inspections on firms to ensure that they comply with labour and tax laws could aid in reducing informality. These policy recommendations, if implemented, would decrease the cost of being formal and increase the perceived cost of operating informally. These policies would be costly for the government in the short-run since they would decrease government revenue and increase spending on the tax administration. However, in the long-run, these policies could increase government revenues originating from corporations and individuals relative to their current levels.

More research needs to be done to determine exactly by how much the corporate tax rate should be reduced to maximize government revenues. Additional studies also need to be done to determine how the Government of Colombia could cut NWLCs without compromising essential services for its residents and citizens, as well as determining how to simplify the two-way transition between contributive and subsidized social security benefits. Furthermore, each Colombian department could examine which minimum wage would better reflect their own productivity levels and cost of living. Finally, the Colombian tax administration could conduct an internal study to identify the amount of financial resources and personnel it would need to improve its labour and tax inspection capacities.

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