Compliance of Small Firms with the Value Added Tax

A study of the supply chain of small parts for buses in Colombia

by

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Submitted to the Department of
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ABSTRACT

Governments are coming under increasing pressure to augment their revenues to offset the social costs of globalization and ever-widening trade and capital liberalization. Unarguably, the most sustainable way to procure additional resources is taxation. In this context, one of the main challenges for developing countries is how to bring the informal sector into the tax net. Influential institutions such as the World Bank and the IMF see the VAT as the solution.

In Colombia, a weak social contract makes citizens perceive taxes as burdens with a marginal contribution to the common good. Consequently, evasion is widespread. This thesis attempts to understand why some small firms evade the VAT and others do not. It revolves around the supply chain for small parts for buses of the informal transportation systems of Colombian cities. This sector slowly evolves—under growing liberalization and top-down formalization of urban transportation—towards higher formality (all firms are now registered and firm owners hold legal titles of their property and machinery). They are informal in that they have varying degrees of compliance with State regulations (most notably tax and labor). Thus, most firms in this study fall somewhere on the continuum between informality and formality.

In the dynamic context of the sector studied, both external and internal factors determine a firm's decision to comply. External actors relevant to a firm's compliance with the VAT include the tax administration agency, clients and suppliers. Internal processes that influence a firm's decision to comply include moral principles (ethics) and customs of firm owners, management changes, and business upgrading.

The main findings are: First, differing from the common argument that high costs of compliance keep firms informal, partial non-compliance is more *expensive* and *complex* than compliance in the sector studied. Second, contrary to what several authors assume, formality is a *prerequisite* and not a consequence of growth. Furthermore, partial non-compliance can keep small firms from growing. In that sense, policies aimed at promoting tax compliance among small firms in order to increase tax revenue can have positive effects on economic growth.

Thesis advisor: Diane Davis
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Acronyms

ANDI *Asociación Nacional de Industriales* (National Association of Industrialists)

CAFAM *Caja de Compensación Familiar* (semi-private organization)

CCB *Cámara de Comercio de Bogotá* (Bogota's Commerce Chamber)

CFS Center for the Future State - Institute of Development Studies, University of Sussex, UK

DANE *Departamento Administrativo Nacional de Estadística* (Colombian Census and Statistics Bureau)

DIAN *Dirección de Impuestos y Aduanas Nacionales* (National Tax and Customs Administration of Colombia)

IDCT *Instituto Distrital de Cultura y Turismo* (Institute of Culture and Tourism – Office of the Mayor of Bogota)

NIT *Número de Identificación Tributaria* (Tax ID for businesses declaring the VAT)

RUE *Registro Único Empresarial* (Firm ID before the CCB registry)

RUT *Registro Único Tributario* (Tax ID for individuals and small firms not declaring the VAT)

STT *Secretaría de Transito y Transporte* (Bogota's local transit and traffic authority)

TLC *Tratado de Libre Comercio* (Free Trade Agreement with the U.S.)

VAT Value-Added Tax

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Introduction

Context

Governments around the world have come under increasing pressure to offset the social costs of globalization and ever-widening trade and capital liberalization (Rodrik, 1997). To compensate for growing income inequalities, higher public expenditure has heightened the need for increased public revenues. Unarguably, the most sustainable way for a government to procure those resources is taxation. In this context, the question of whom and how to tax becomes relevant. The recipe put forth by influential organizations like the International Monetary Fund and the World Bank has been to focus on the shorter term and (potentially) large individual taxpayers. "In the longer term, it is expected that indirect taxes, such as the value-added tax, (…) will gradually insinuate themselves deeper and deeper into the informal economy" (Joshi and Ayee, 2005, p 2).

The informal sector in developing economies continues to account for significant shares of the labor market (Tokman, 1992; Lopez 1996; De Soto 2000). Small businesses constitute what are often referred to as the 'hard-to-tax' sectors of the economy. In this research, I explore the practices of small firms regarding the VAT. In that sense, I want not only to discern to what extent can the VAT actually penetrate the informal sector but also, in a broader sense, to understand why does a small firm complies or not with tax regulations. This research is hence framed within the debate over taxes and the informal sector; that is, given the high collection costs it entails, should developing countries try to bring the informal sectors of their economy into their tax net? And if they should, how could they go about it? (Joshi and Ayee, 2005).

Contributions and limitations

Clearly, answering these questions might be too ambitious for a small research such as the one presented here. It is important to bear in mind the *specificity of the firms studied* and the *limitations of the methodology* used for this research in order to avoid inaccurate generalizations.

This thesis revolves around the manufacturing firms that supply with small parts the buses of the informal urban transportation systems of Colombian cities. The firms studied are distinct (within the 'small firm' categorization) mainly because of their relative high initial capital investment and reliance on skilled labor. They are similar to other sectors in the informal economy in that they are all family businesses that started as completely informal (no registration, no taxes paid, poor labor practices). Although the sector as a whole has moved towards formality, most firms in this study are to be found somewhere on the continuum between informality and formality. In order to better understand my direct observations in the field, I go to great lengths to frame the context in which firms operate and thrive.

In addition to the limitations imposed by the specific nature of the firms, it is important to bear in mind that this is a qualitative research based on a small snowball sample (see methodology section) made in a somewhat static manner[1]. The specificity of the sector studied and the limitations of the methodology mean that the findings of this research can only be seen as contributions to an ongoing debate and extra caution should be taken when trying to bring them into a more general context. This is why the conclusions of this thesis are not concrete policy recommendations but mere broad guidelines for future actions within the Colombian public policy context.

Beyond the limitations described, this research can broaden and qualify the debate over taxation of the informal sector. Some of its results (particular to a specific sector as they may be) defy a part of the conventional wisdom upon which much of the debate is based. In that, they open the door for further research on the subject.

Additionally, when it comes to modeling individual taxpayer behavior, the economic literature has systematically ignored the broader societal environment in which decisions are made. This research attempts at bridging that gap, by bringing together national/global dynamics and trajectories of institutional change with the study of a group of firms within a specific sector—namely, manufacturing firms of small parts for buses of the informal urban transportation systems in Colombia.

[1] Given the qualitative nature of this study, I can only reconstruct the trajectories over time of particular firms based on the testimonies of owners, competitors, workers, sales representatives, clients, and providers. In that, this study takes a "snapshot" of a sector. This is of limited effectiveness when capturing broader dynamics across time, such as the ones a quantitative research based on time-series data can provide. That said, the unrecorded nature of most of the issues addressed in this research makes such an approach impracticable.

The case study

This thesis is divided in four chapters. In the first two chapters, I provide the context in which the firms studied operate. In the third chapter, I focus on the manufacturing firms and their business practices; I disaggregate the factors that come into play to determine a firm's level of compliance with the VAT. In the final chapter, I summarize the lessons extracted from the case study and I put forth some guidelines for policy design.

Taxation in Colombia

In Colombia, limited tax revenue (due to low taxation and high evasion rates) has undermined the ability of the State to provide public goods. In addition there has not been a clear State/society bargaining process to determine fiscal policy. This two interconnected factors have lead State and society to fail in developing a strong social contract. This failure influences the way people perceive their tax obligations and consequently negatively affects tax compliance. Taxes are seen—especially by sectors with little or no political leverage (like the one in this study)—as imposed regulations with only a marginal effect in the common good (if at all).

In this context, anti-tax sentiment and widespread non-compliance coupled with a continuously changing fiscal policy make the work of the tax administration all the more challenging. Nevertheless, the DIAN (*Dirección de Impuestos y Aduanas Nacionales*—the National Tax and Customs Administration) has slowly come up to par and today it has a strong presence in the mind of business owners who dare not to take it lightly. At present, of the taxes that the DIAN administers at present, the VAT is the highest yielding (43% of total tax income in 2004).

Despite being perceived by influential organizations as the only way to bring the informal sector into the tax net, the VAT is far from an ideal solution. In policy and academic circles, it is believed that the VAT's high costs of compliance coupled with bookkeeping inability of small firms undermine its ability to penetrate the informal sector.

The supply chain

Rapid urbanization and weak governments (at the national and local levels) allowed informal systems of urban transportation to develop in Colombian cities over the past fifty years. Around them, several domestic supply chains flourished to provide the buses of these systems with the maintenance their owners and drivers could afford. The supply chain in this study is heterogeneous. It includes firms of all sizes and degrees of formality who are facing an increasingly changing scenario. Liberalization policies, enhanced enforcement capacity of tax authorities, and formalization of transportation systems are some the biggest challenges the small firms studied are facing. It is in this dynamic context where the studied manufacturing firms have thrived.

Small firms: the VAT as seen from below

In Colombia, a certain degree of enforcement and reduction of red tape, have led businesses across sectors to formally register. The manufacturing firms in this study are registered and pay at least some of their VAT. Nevertheless, it is not high costs of compliance that are not keeping firms from complying. Non-compliance is more complex and expensive than compliance itself both in the short term (increasing managerial and accounting costs, and in cases of poor management, greatly increasing production costs) and in the long term (hindering access to formal credit).

In a dynamic context of constant change, both external and internal factors determine a firm's decision to comply or not. External factors relevant to a firm's compliance with the VAT include the tax administration, clients and suppliers (those that are relatively more formal). Internal processes that influence a firm's decision to comply include moral principles (ethics) and customs of firm owners, management changes, and production upgrading.

Lessons

The main findings of this research are: First, in contrast to the common argument that high costs of compliance keep firms informal (e.g. De Soto, 1989, 2000; Ebrill et al, 2001), in the sector studied, partial non-compliance is more *expensive* and *complex* than compliance. Second, contrary to what several authors assume (e.g. Maloney, 2004) formality is *prerequisite* and not a consequence of growth. Furthermore, non-compliance keeps small firms from growing.

Research Methodology

Fieldwork for this thesis was carried out during two and a half month during the summer of 2005. The research methodology was primarily qualitative, using a snowball sample and relying on face-to-face interviews (28 in total) with key actors[2]: owners[3] (2+1+8+5), managers (0+1+2+4), and one accountant (0+0+1+0). I also interviewed public officials at the DIAN (2) and at Bogota's local tax administration (1) and the director of the management upgrade program of the CCB (1). Where relevant, quantitative supporting data was sought from multiple sources, especially form the DIAN, the *Banco de la República* (Colombia's central bank) and the DANE (Colombian Census and Statistics Bureau).

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[2] In addition to formal interviews, informal conversations with owners and especially with sales representatives of firms provided invaluable insights on the business practices in the sector. Informal conversations with a former official of Transmilenio also provided insights on the bigger picture of the urban transportation sector in Colombia.

[3] Numbers in parentheses are meant to reflect the number of interviews in each link of the supply chain (scrap metal collectors + metallurgical firms + manufacturing firms + retail and mechanical shops).

Chapter I. Taxation in Colombia

1. Tax Compliance and Taxation in Colombia

1.1. Tax Compliance

The bulk of academic literature on tax compliance revolves around income tax in developed countries and it has stemmed from neoclassical economic theory[4]. Taxpayers are seen as wealth-maximizing individuals, with a natural tendency to free ride and shirk (Cowell, 1990). Economists have modeled evasion as 'a taxpayer adding one more risky asset to a portfolio'. The explanatory power of these models has proved limited. Many (if not most) taxpayers comply more fully than what these models can predict and "a convincing explanation for why full compliance so often arises as a rule of conduct is still to be proposed" (Marchese, 2004, p 255). Some economists have started "to grapple with the findings from other social sciences that could explain the observed compliance levels" (Andreoni et al. 1998, p 819).

Recent works have incorporated refinements in collective action theory to generate a more nuanced approach to individual taxpayer behavior. Authors in this strand of the

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[4] For reviews on that body of academic work see Pyle (1991), Andreoni et al. (1998) and Marchese (2004).

literature understand that taxpayers go beyond material calculations and they have moral principles and are affected by social factors (Marchese, 2004). Individuals are now seen as emotional/moral reciprocators[5] (Kahan, 2005) and past policy recipes are starting to be revisited in the light of new findings. These works share one premise; they believe that "tax compliance is the consummate collective action from a public policy point of view" (Kahan, 2005, p 10). Nevertheless, both past and current efforts to build microeconomic models of taxpayer behavior understandably ignore broader societal factors. In that, these stylized models have failed to capture broader cultural, political and macroeconomic dynamics that affect tax compliance decisions by individuals.

This research tries to bridge that gap by framing individual behavior of taxpayers within the broader political and macroeconomic context of a specific developing country, Colombia.

One of the most notorious absences in the tax-compliance literature has to do with the question of 'where do taxes come from and what is the inference of a tax's origin on its level of compliance'. It is somehow understandable, given that in industrialized countries there is a relatively explicit agreement between citizens and State over *how much* is to be collected and *what for*. The agreement is the result of a state/society bargaining process. In simple terms, when a goal is set for the country (either by a ruler—e.g. eighteen century England—or through a democratic process) a negotiation takes place between the State and politically engaged organized citizens (political parties, unions, business

[5] "When they perceive that others are behaving cooperatively, individuals are moved by honor, altruism, and like dispositions to contribute to public goods even without the inducement of material incentives. When, in contrast, they perceive that others are shirking or otherwise taking advantage of them, individuals are moved by resentment and pride to retaliate." (Kahan, 2005, p 1)

associations) over who is going to pay and how much. The collective action is explicit and responsibilities of both State and citizens are clear. Thus developed countries have managed to build strong social contracts over time (Schneider et al., 2004). Contrastingly, social contracts tend to be weak in the developing world. Although there is heated debate over government expenditure and policies, "the processes of making and changing tax policy are not very transparent" (Schneider et al., 2004, p. 1). I now turn to the question of why this is so.

1.2. Political Economy of Taxation in Colombia

Mick Moore (2004) has explored the question of why are taxation issues largely absent from the public political agendas in the 'South'—i.e. why have societies in the developing world have failed to build strong social contracts?

1.2.1. How is tax legislation shaped in Colombia?

Given that Moore (2004) tries to answer the question for the entire developing world, not all his arguments stand true for the Colombian case. Nevertheless, several of them can help explain the political dynamics of taxation in Colombia. In the following paragraphs, I briefly summarize his main arguments and explore their relevance in the Colombian context. I also bring forth additional arguments from other authors.

First, governments in most developing countries finance a large share of their expenditures with non-tax sources. Their revenues come from unearned rents, especially from natural resources, and/or strategic rents—i.e. military and development aid. Despite being the fourth largest 'beneficiary' of U.S. military aid (after Israel, Egypt and Iraq), foreign aid in Colombia accounts only for a small share of total public expenditures[6]. The contribution is significant enough to transform the U.S. executive and legislature in constituencies of the Colombian government, but Colombia is far from other countries in the developing world—especially in sub-Saharan Africa—where foreign aid is the most significant financial source for public spending (CFS, 2005).

Second, the growing prevalence of the 'less visible' indirect taxes keeps taxes outside the public debate. This can be explained by three factors. (i) Economies that revolve around primary commodities make international trade a priority for tax revenue. Nevertheless, Colombia's share of VAT on imports is lower than that of its neighbors—around 32%, compared to 40% in Peru and 58% in Bolivia (Ebrill et al., 2001). (ii) Indirect taxes (on transactions and not on income or wealth) are less unpopular politically[7]. (iii) Low average incomes translate into low revenue from personal income tax. In Colombia, this is severe. In 2004, only 523.122 individuals/businesses filed their income/corporate tax returns (in a country of over forty million people). Of them, 374.631 corresponded to personal income tax returns (1.7% population economically active), which in turn represented only 4% of overall income/corporate tax revenue (Fedesarrollo, 2005). Thus, the bulk of the income/corporate tax comes from a few large corporate taxpayers. An additional explanation (see 3.1.1. in this chapter) for the prevalence of indirect taxes is the overt promotion of such mechanisms by multilateral agencies (Goode, 2000;

[6] According to Center for International Policy, since 2000, Colombia has received over half a billion dollars on average per year in military and police assistance from the U.S.. The tax revenue over the same period was around 14 billion dollars per year in average.
[7] "Indirect taxes, being less visible, tend to encounter less resistance than direct taxes." (Burgess and Stern, 1993, p 802)

Schneider et al., 2004; Joshi and Ayee, 2005). In Colombia, The VAT was introduced in the mid-sixties and its significance as a share of total tax income predates this recent trend (see I.3.2).

Third, there are incentives for individualized political strategies. As described above, a large share of tax revenue comes from a relatively small number of large corporate taxpayers[8]. This allows for small pressure groups, to lobby for exemptions and favorable policies in general. Exemplary cases of small yet powerful pressure groups or individuals in Colombia include first and foremost the beer monopoly[9] (Reyes, 2003), and others like the financial sector[10], oil companies[11], and non-profits[12]. Each interest group faces a different set of taxes. Additionally, this concentration is coupled by a tax system that is complex (e.g. a highly differentiated VAT), changeable (see 2. and 3.3 in this chapter), and of discretionary application.

Fourth, in past decades, especially in South America "high inflation [undermined] any incentive to invest scarce political resources in negotiating taxation issues." (Moore, 2004, p. 18). Inflation is a menace of the past. Colombia has not seen double-digit inflation in over 15 years and it is currently well under 5%.

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[8] In developing countries, "an insufficiency of resources leads administrations to concentrate their enforcement efforts on large taxpayers" (Casanegra de Jantscher, 1990, p 179).

[9] Against new levies on beer and most recently to avoid any taxes in the recent merger with a South African brewing company.

[10] Against the bank debit tax, introduced in 1998 and to prevent inflation adjustments from being removed from tax legislation.

[11] To avoid heavier taxation on their activities—as has happened in Venezuela and Bolivia in recent years.

[12] To protect the exemptions on income/corporate tax made on donations. They work closely with banks, which also benefit greatly from current legislation.

Fifth, there is a factor widely studied in the Colombian context, especially at the local level. The relationship between State and society are more founded on patronage driven agreements than on open rights and obligations. Widespread clientelism limits the transparency of policy processes and undermines democratic participation in general (Gutierrez, 1998). Agreements are based on direct benefits (jobs, contracts, construction materials), not on the open representation of particular interests that may lead to policy changes. This hinders the development of state/society bargaining over the central issue of taxes.

Finally, and on a similar line, Tendler's (2005) research in Brazil points to a particularistic unspoken agreement "between politicians and their constituents—myriad small-firm owners, many in the informal sector" (p 14). Politicians advocate for policies that are "burden-relieving"—immediate, automatic, universal, and conspicuous exemptions and subsidies to small firms. The promotion of such policies is often accompanied by the tacit deal between politicians and small firms to provide subsidies and exemptions in exchange for political support. In the case of the sector studied, lack of organization and cooperation among firms had translated in lack of open participation in the political processes (see III.3.1.). Nevertheless, it is common to see Colombian politicians of all levels and strides, from the president to councilmen of small towns, advocate for such "burden relieving" policies.

All these reasons explain why taxation has failed to be among "the range of concerns that politically concern citizens debate, and around which political parties and interest group organizations mobilize" (Moore, 2004, p. 8). This failure systematically undermines the construction of a strong social contract (Schneider et al., 2004). The link between tax and public expenditure is absent and thus a notion of collective action for the procurement of collective goods fails to develop.

1.2.2. Taxation without a strong social contract

In this context, taxes are seen only as one among several government-imposed regulations. Proof of that is that law-abiding firm owners in this study do not see non-compliers as free-riders. Someone else's noncompliance is seen as a problem only if it comes from a competitor that does not pay taxes in order to provide products with a lower price to the final customer (see 2.1.1 in Chapter III). In simple words, what is found to be problematic is not that 'he is not contributing to the pool' (i.e. free-riding) or that 'he is breaking the law' but that 'he is unlawfully stealing clients'.

From a top-down perspective, the collective action entailed by taxation is clear. People pay their taxes and the State provides goods that benefit all payers (social welfare, defense, infrastructure, etc.). From a bottom-up perspective, in the context of a weak social contract, the collective action is not so clear. In developing countries, inefficient States and the lack state/society bargaining to shape fiscal policy have lead citizens to perceive taxes as burdens with (if any at all) a marginal effect on the common good[13]. In this way, from the perspective of the citizen, taxes are imposed from above and the rationale behind them is rarely evident. Without a strong social contract, taxes are reduced to a burden, loosing their meaning as contributions for the 'common good'. It is

[13] According to a survey conducted by Bogota's Institute of Tourism and Culture, only 23,2% of citizens consider that "taxes are invested for the benefit of the city" (IDCT, 2003).

safe to assume that with such weak social contract, a country will have higher evasion rates (see the next section for the case of Colombia). Evasion will in turn reduce the State's revenue and its expenditure capacity creating a vicious circle; "administrative weakness and distorted economic activity complicate the construction of a social contract around tax, in part by starving the state of resources with which to purchase public support" (Moore, 2004, p 11).

A new strand of literature on the political economy of taxation in the third world is developing around this cycle. In the Center for the Future State's Signposts to More Effective States (2005), taxation is put forth as a mean to "get a more effective, accountable public authority that might be more responsive to the needs of poor people" (p. 44). It is so because tax can be a factor that encourages *constructive state/society engagement*. Other factors include participatory policy mechanisms, and careful design and implementation of anti-poverty programs.

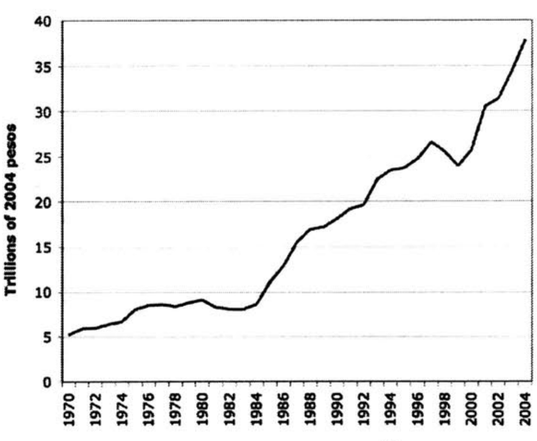
From this perspective, it is important to remember that the "invisibility" of the VAT—which makes it easier to implement—further weakens the social contract.

2. Colombian Tax Administration

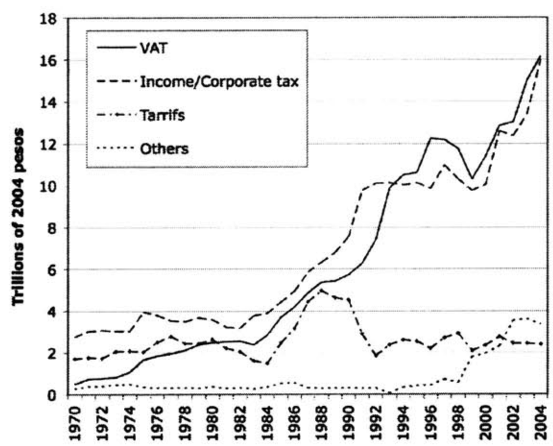
> "On paper at least, Colombia has one of the best tax systems for a developing economy."
>
> McLure and Zodrow (1997 p. 113)

As seen in the previous section, the Colombian State has traditionally been weak in no small part due to limited tax revenues. Powerful elites have influenced the political system to keep the level of taxation from rising. This becomes evident in the low level of taxation that the country held until the mid-eighties. Additionally, there has been a longstanding tradition of anti-tax sentiment combined with high levels of evasion. Kalmanovitz (2005) holds that during the seventeenth and eighteenth century, evasion was around 1.75% of GDP. More recently, Vasquez-Caro and Slemrod (2005) estimated that between 1997 and 2000, evasion rate of VAT among formal businesses was around 23%—i.e. around 1% of GDP just in VAT evasion.

Only until recently (the mid eighties) has the government revenue increased in a consistent manner.



Yearly Tax revenue in Colombia[14] (1970-2004)



Yearly revenue per tax (1970-2004)

The Colombian tax system is administered by the DIAN (Spanish acronym of National Tax and Customs Agency). Currently the DIAN has eighty thousand employees in thirty-two cities and it administers six taxes (income, VAT, financial transactions, customs, gasoline, and stamp). From 1980 to 2002, it underwent at least five major reorganizations

[14] All graphs in this chapter were made by the author with data from the DIAN and the *Banco de la Republica* (the Colombian Central Bank).

and there were 22 fiscal reforms. In short, "the tax system has been in almost constant flux during the past thirty years" (McLure and Zodrow, 1997, p 57). Most recently, the DIAN's resources have increased from 0.7% of collections in 1993 to 1.8% in 2001 (Vasquez-Caro and Slemrod, 2005). Nevertheless, officials I interviewed feel the agency is still well below an adequate level of funding that would be around 5% of collections (the average level of funding of such agencies in developed countries). They perceive improvements on the levels of corruption inside the agency but they admit there is still work to be done, especially in customs.

Despite scarce resources and some corruption, over time the DIAN has positioned itself as a believable enforcer of tax regulations and today has a strong presence in the mind of business owners (see III.2.2.1). In 2003, the DIAN performed around 35.000 visits to small and medium enterprises in major cities (purpose of the visits included identification, verification of inscription, annulment of ID, and audits in general).

3. The Value Added Tax (VAT)

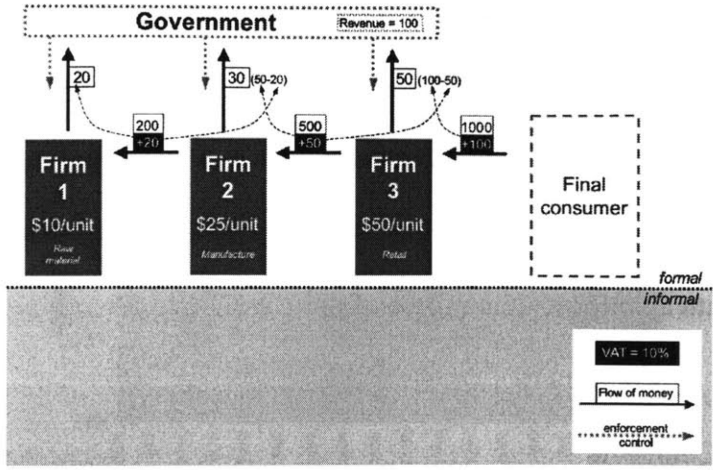
3.1. Formalizing and informalizing features of the VAT

In this section, I present a review of the some of the literature on VAT in developing countries, as well as some theoretical considerations on the subject. The arguments presented in this section will be contrasted in Chapter III with the evidence collected in the fieldwork I carried in Colombia during the summer of 2005.

3.1.1. Formalizing potential of VAT: chained structure

> "The informal sector is informal only because the existing tax machinery has not found a way to bring it into the tax net, but the incentive of rebates on inputs may turn that trick."
>
> John Toye (2000, p. 38)

Assuming that tax enforcement can be effective, VAT is structured in a manner that makes evasion more difficult. Firms pay tax only on the value they add to the product, in other words, they deduct from the tax payment they receive from buyers the tax they paid to suppliers. This means firms are the collectors of the tax, reducing collection costs for the tax administration. In this way, the entire economy helps in the enforcement. This is why multilateral agencies such as the World Bank and the International Monetary Fund favor systems of indirect taxation over systems of direct taxation (Goode, 2000; Schneider et al., 2004; Joshi and Ayee, 2005). Additionally, it is expected that indirect taxation systems, such as the VAT, will in the longer term "gradually insinuate themselves deeper and deeper into the informal economy" (Joshi and Ayee, 2005, p. 2). This might be easier to understand from a supply chain perspective. The chained structure of the VAT forces firms that would otherwise operate 'under the radar' to become visible. In this manner, one could expect entire supply chains to 'surface' as the result of the implementation of the VAT. I the scheme below, I present a stylized diagram of a supply chain of three firms producing twenty units with a ten percent VAT.



Chained structure of VAT - Example of formal supply chain (three firms, production of twenty units with a ten percent VAT)

3.1.2. Informalizing force of the VAT

In The Other Path, Hernando De Soto (1989) gives a detailed account of how an oppressive and illegitimate government bureaucracy, with its endless streams of red tape and high costs of compliance with the law, locks the poor out of the country's economic system. This group—a majority in Peru—is thus forced into the underground world of the informal economy.

Similarly, the strongest case made against the VAT is that its compliance implies excessive costs for taxpayers, especially for small firms. There is no data for developing countries but in industrialized economies,

> "Since these are largely fixed costs, independent of the amount of tax payable, they fall especially heavily on smaller traders: Cnossen (1994) puts them in the order of 2 percent of turnover for those with turnover below \$50,000, falling to about 0.3 percent for those with turnover above \$500,000."
>
> Liam Ebrill et al. (2001, p 53)

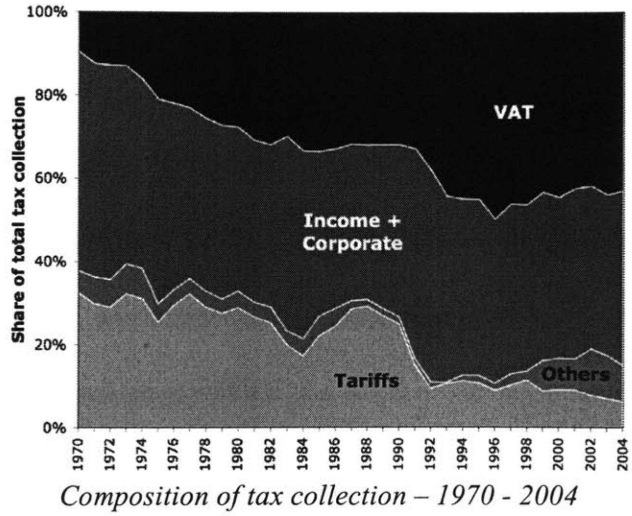
What is important to consider when dealing with compliance with VAT is that what matters is "the ability to maintain records of paid invoices, incoming and out going, when each paid incoming invoice is an entitlement to a tax credit" (Toye, 2000, p. 38). Consequently, VAT requires accounting and managerial structures that (it is commonly believed) small firms do not have and in most cases, cannot afford.

These high costs of compliance coupled with sheer bookkeeping inability of small firms would translate into an informalizing force of the VAT.

3.2. VAT in Colombia

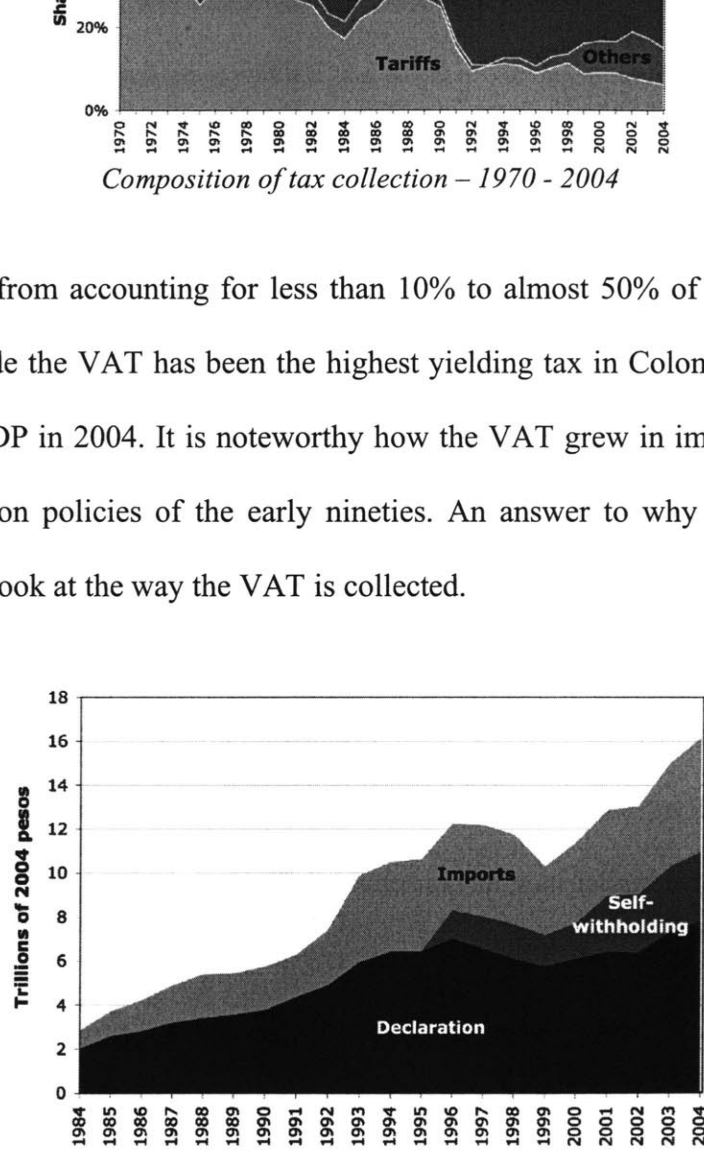
For the past two decades, tax experts and advisers have seen the Value-Added Tax as the most effective way for developing countries to increase their tax revenue (Toye, 2000). Influential institutions such as the World Bank and the International Monetary Fund often favor its implementation in countries where a large informal sector would hinder a strong system of direct taxation (Goode, 2000; Moore, 2004; Joshi and Ayee, 2005). Relatively low political visibility and high returns make the VAT the preferred choice for governments in the developing world (Moore, 2004).

The case of Colombia seems special given that the VAT was introduced in 1965. It was introduced as a broad-based sales tax structured like a manufacturers' tax on finished goods and imports. The system was converted in the next year into an invoice/credit type VAT (McLure and Zodrow, 1997). Ever since, VAT legislation has been growing; its rates have multiplied, and its base has expanded. The following graph shows the growing significance of the Value Added Tax as a percentage of the overall government tax income.



Composition of tax collection – 1970 - 2004

The VAT went from accounting for less than 10% to almost 50% of total tax revenue. For over a decade the VAT has been the highest yielding tax in Colombia amounting to over 5.4% of GDP in 2004. It is noteworthy how the VAT grew in importance after the trade liberalization policies of the early nineties. An answer to why this is so can be found when we look at the way the VAT is collected.



Collection of VAT in the past two decades

In the graph above, *Imports* represent the VAT levied on imported goods. Despite growing contraband, trade liberalization and stronger customs have increase the amount collected from imports. *Self-withholding* was a collection figure introduced in 1996 where large businesses started withholding 75% of the VAT that they would otherwise pay when buying from suppliers. Thus, large firms not only collect the VAT from their clients but also from themselves. *Declaration* refers to the VAT collected by firms over goods they produce and sell. It is in this area that I focus in chapter III when I look at the business practices of small firms.

Beyond its expansion both as gross income and as share of overall revenue, the VAT still has room to grow; its current base is only 33% of GDP[15], and a "substantial fraction of goods and services are exempt from tax or are zero rated" (Bird et al., 2005, p. 21). At the same time, tax experts call for simplification of the VAT system. Colombia's VAT has the highest number of rates (nine) in the world (Ebrill et al., 2001; Fedesarrollo, 2005). This high differentiation in rates and exemptions have made the VAT legislation complex and thus hard and expensive to administer. To counter the relatively regressive nature of the VAT (Ebrill et al., 2001) conscious efforts have been made. Today, most products of regular consumption by the poor are exempt (education, basic nutrition). Nevertheless, in Colombia the VAT is "widely thought of as a tax on the poor, whereas the income tax is thought of as a tax on higher income households" (Bird et al., 2005, p. 21).

Conclusions

In Colombia, limited tax revenue (due to low taxation and high evasion rates) has undermined the ability of the State to provide public goods. In addition there has not been a clear State/society bargaining process to determine fiscal policy. This two

[15] As compared to VAT bases around 50% of GDP in other countries in Latin America (Ebrill et al., 2001).

interconnected factors have lead State and society to fail in developing a strong social contract. This failure influences the way people perceive their tax obligations and consequently affects tax compliance. Taxes are seen—especially by sectors with little or no political leverage (like the one in this study)—as imposed regulations.

In this context, anti-tax sentiment and widespread noncompliance coupled with a continuously changing fiscal policy make the work of the tax administration all the more challenging. Nevertheless, the tax administration (DIAN) has slowly come up to par and today it is a strong presence in the mind of business owners who dare not to take it lightly. At present, of the taxes that the DIAN administers, the VAT is the highest yielding (43% of total tax income in 2004).

Despite being perceived as the only way to bring the informal sector into the tax net, the VAT is far from an ideal solution. It is believed that the VAT's high costs of compliance coupled with bookkeeping inability of small firms undermine its ability to penetrate the informal sector.

Chapter II. The Supply Chain

This research revolves around the supply chain because (as seen in I.3) compliance with the VAT is linked to the relationships between sellers and buyers—i.e. the different links in the supply chain.

In this chapter, I will first go over the dynamics of urban transportation in Bogota, that is, the context in which the manufacturing sector studied has thrived for over twenty years. I will then focus on the different links of the supply chain of small parts for buses, one of which are the manufacturing firms studied. Finally, I will explore some of the dynamics (both local and global) that are affecting this sector both from perspective of the demand for products and the supply of raw material.

1. Transportation in Bogota

In this section, I explore the context (institutional, economic and social) in which the sector studied has evolved. Although the production of manufacturing firms in this study is not limited to the market of Bogota[16], the case of Bogota is representative of urban transportation dynamics in other cities in Colombia (and South America). It also sheds

[16] As will be described later, firms produce for the national market and marginally for the markets of neighboring countries.

light on the question of why and how did both urban transportation and the sector studied thrived in the midst of informality.

1.1. History of modern public transportation in Bogota (in a nutshell)

Bogota was a small town for over four hundred years[17]. In the last century, its growth boomed and it is now a seven million inhabitants developing metropolis. A weak and centralized national government (as will be described in I.2.) had to deal with this rapid urbanization. At the local level, it was not until 1988 that majors started to be democratically elected in Colombia and it was not until 1991 that a new Constitution drew the lines for serious political and fiscal decentralization. This means that frail local governments had to cope with harsh urbanization processes. In this context, Bogota's transportation agency failed to provide or even regulate public transportation. Private entrepreneurs handled the provision of the service, having national and local authorities as regulators and local authorities as enforcers of regulations. It was a combination of private provision under ill-conceived and poorly enforced regulations that lead to a perverse transportation system and the consequent degradation of living conditions in the city (congestion, pollution, insecurity). For over forty years the local government tried to come up with a planned mass transportation system for the city. Political power of local bus companies, national and local institutional weakness, and lack of coordination between national and local governments condemned all efforts. Only in 2001, ten years after the serious efforts of decentralization began, and after five years of planning and

[17] In 1832, it had 36.465 inhabitants; in 1881, 84.723 inhabitants and at the turn of the century it had 100.000. In 1938, its four hundredth anniversary, Bogota had 333.312 inhabitants. By 1950, after the inclusion of five neighboring towns, it reached two millions. (Source: Alcaldia Mayor de Bogota and Banco de la República)

building, did Bogota's government started operating a mass public transportation system. Nevertheless, it is only the beginning. Five years later, at the end of phase II the new system provides 15% of travels within the city. In later sections of this chapter, I will explore some of the consequences for local businesses of the formalization of transportation in the city.

1.2. The informal urban transportation system[18]

1.2.1. Institutional arrangement

In this section, I will describe to some detail the institutional arrangement that determines the structure of incentives that in turn explains the dynamics of operation and maintenance of the buses.

The *Secretaria de Transito y Transporte* (STT) is the local agency responsible of issuing and enforcing traffic regulations for Bogota; it also enforces those mandated by the national government. The STT is responsible for authorizing the creation and overseeing the operation of bus companies, assigning bus routes, and determining the fleet a bus company needs to serve the assigned routes.

Bus companies in turn, have rights over bus routes issued by the STT. The sixty-six existing companies own few buses[19] and their assets are the routes—i.e. they are basically intermediaries between the State and the actual providers of the service. Powerful trade associations of bus companies lobby before the STT for new routes

[18] Sections 1.2.1. and 1.3.1. draw heavily from Ardila (2004).
[19] 96% of the bus companies own less than 10% of their fleet, the legally required percentage.

(incapable of assessing the actual demand for transportation in the city), and Congress and the Transportation Ministry of the national government for favorable legislation, most notably regulations on the lifespan of vehicles[20].

Bus companies rent the routes to the owners of the buses, who can only operate if affiliated to a bus company. Bus owners and drivers are the actual providers of public transportation. There is a lump sum affiliation fee plus monthly fees. The bus owners seek routes that have a high volume of passengers and a high turnover (determinants of total revenue). They invest the largest amount of capital and decide when and where to operate and maintain the buses. They usually hire one driver to operate their bus and pay him on the basis of a commission per passenger (occasionally, the owner is the driver). Given the government-imposed low fares, having a single driver per bus means that he has to work shifts of 13 or 14 hours a day to make a living.

In short, the incentive structure has bus companies trying to get more routes (even if they largely overlap existing ones), bus owners having their buses run as long as possible (hours/day and years/vehicle) and bus drivers trying to get as much passengers as possible. Given the weakness (and corruption) of the STT there are too many authorized routes (517) and to too many buses (20,764 in 1997 in the hands of 25,000 owners). Oversupply has been a problem for over a decade. In 1993, a law sought to restrict the

[20] International standards are around fifteen years. In Colombia, a bus can legally operate in public transportation for thirty years. After that, most are scrapped and a few become school buses.

number of licenses to operate buses within the city[21]. Two problems unfolded. First, illegal (pirate) buses proliferated, although they are now being controlled with the implementation of a smart card. Second, in 2001, a court ruling allowed Carlos Delgado, a bus operator, to get new licenses to operate new buses. This small opening—under a scheme where Delgado would get the license and sell it the next day—translated in 1.741 additional buses legally entering the transportation system[22] with a personal profit calculated around US$13 million (El Tiempo 10/08/2005a).

This oversupply—evident in the conspicuous low average occupation of vehicles—means extreme economic competition takes place in the street (a phenomenon referred to as *Guerra del Centavo*). Drivers disregard schedules, race against each other and stop at any place a prospective passenger demands. They literally but also metaphorically are 'racing' to the bottom[23]. Maintenance is not frequent and it has to be cheap. This translates in a large demand for cheap parts of low/intermediate quality. As will be explained in chapter III, here is where small firms come in.

1.2.2. Production of buses

[21] For a new bus to start working in public transportation, another one has to be scrapped thus keeping the number of buses constant.

[22] Finally in April 2005, the STT finally closed this legal loophole under the largest media scandal the current city administration has endured: the heads of the STT and the Public Works agency (SOP) rolled because of this incident. Carlos Delgado was the biggest contributor to the electoral campaigns of the Mayor, nine councilmen as well as that of the mayor of Soacha, a one million inhabitants neighboring town to which Transmilenio is being extended (El Tiempo 10/08/2005b).

[23] In 2002, the city government imposed a rotating restriction of buses and taxis (allowing them to circulate only three out of five business days). The measure was received with harsh resistance. Bus and taxi owners blocked streets and brought the city to a halt. After a week of negotiations, government and bus companies associations agreed to limit the restriction to only one day including Saturdays. Oversupply is still a problem with half occupied buses contributing to the congestion of the city's main arteries and to the pollution of the city as a whole (Bogota now ranks as the third most polluted city in Latin America after Mexico D.F. and Santiago de Chile).

There are four types of buses, each with a distinctive market. The first two correspond to larger vehicles: *ejecutivo* and *corriente*. It is here where the largest firms are to be found: GM's Colmotores (Chevrolet) and a few local ones (Superior, el Sol, JGB, Del Sur). In the market for medium-size vehicles, *busetas*, competition is stronger with GM and Mazda (both with local assembly plants) competing with Latin American companies Encava, Agrale and Sultana (from Venezuela, Brazil and Mexico respectively) and several local firms (Fana, JGB, Del Sur, among others). The market for the smallest vehicles, *colectivos*, is the most competitive for regular vans can be easily adapted. Here, most car companies (Asia, Iveco, Kia, Mercedes Benz, VW, Hyundai, Mazda, Nissan, Mitsubishi, Daihatsu, Chevrolet) compete with several local firms (NPU, Fana, JGB, Del Sur, among others).

It is important to note that all local firms manufacture the bodies and use imported chassis[24]. The chassis includes all mechanical parts: engine, gearbox, axles, and brake system. The firms in this study produce small parts that are replacements for some of these mechanical systems. Body designs are somewhat idiosyncratic (especially in smaller vehicles) and manufacturing is labor-intensive. It is also noteworthy that most buses are assembled (if not manufactured) locally. Imports are limited and as seen bellow this is not by chance.

1.2.3. Procurement of parts

The buses that run across the city contain many parts that are relatively easy to produce, that do not require sophisticated production engineering (Amsden, 2001). Thus, a large

[24] Myriad brands are used, including Mercedes Benz, VW, Renault, Hyundai, Daewoo, Hino (Toyota), Mazda, Nissan, Mitsubishi, Daihatsu, Chevrolet/Isuzu, International and Agrale.

set of labor-intensive small and medium industries (the subject of this research) have developed around the transportation system providing retail and mechanical shops with cheap, low/intermediate quality parts.

As described earlier, buses are subject to heavy usage and little maintenance. When they require maintenance owners and drivers of buses (final consumers in the supply chain) turn to mechanical shops or to (more informal) small retail shops (see 2.4. in this chapter).

1.3. The new Bus Rapid Transit (BRT) System – Transmilenio

1.3.1. A superimposed system

In 1996, the Japan International Cooperation Agency presented a Transportation Master Plan for Bogota with 20 years range. It included a system of an upgraded version of the bus way built during the Pastrana administration (88-90). It was not until mayor Enrique Peñalosa got to power in 1998 that serious plans were developed (Chaparro, 2002). Inspired by the Curitiba system (Brazil), a Bus Rapid Transit was designed. The system consists of large articulated buses running along dedicated lanes. They pick up riders at stations with a subway-like collection system (smart cards and turnstiles). A new city agency called Transmilenio was created. It was in charge of planning the system and supervising daily service (contracting out service provision with new and highly capitalized operators), and of collecting the fares (paying operators per kilometer logged). By taking the cash flow out of the hands of bus owners and drivers, the new system eliminates the *Guerra del Centavo* and provides and orderly operation.

In order to overcome the political blockade of bus companies (that had sunk previous efforts), the largest bus companies were granted rights over the operation of the new buses. The success of Transmilenio has created a BRT-rush across Colombia[25] and the developing world promoted by the World Bank and other development agencies[26]. The new system displaces the old system at different levels and has generated interesting opportunities for some of the larger businesses as well as problems for the smaller, more vulnerable ones.

1.3.2. Displacement, adaptation and growth

The new buses are bought from Brazilian companies (Marcopolo and Busscar). They also manufacture only the body using Volvo and Mercedes Benz chassis. The GM assembly plant in Colombia (Colmotores) pushed for, and succeeded in having the Foreign Commerce Ministry treat the new buses as consumer goods instead capital goods—in opposition to what Bogota's city government and the new operators intended. This implied higher tariffs for the Brazilian buses. However, this worked out for the best for other local businesses. Marcopolo entered a joint venture with Superior (one of the largest local body manufacturers at the time) that resulted in a refurbished large plant in the south of Bogota, Superpolo[27]. Today, the experience of this new company has

[25] With strong support from the national government, six cities are in planning or bidding stages for the implementation of BRT: Medellin, Cali, Barranquilla, Pereira, Cartagena, and Bucaramanga.
[26] It is much cheaper than other mass transportation alternatives such as the light rail and the subway. According to Revista Dinero (2/26/2006) projects for BRT systems are underway in Nigeria, South Africa, Tanzania, Senegal, India, Bangladesh, Israel, Vietnam, Pakistan, Laos, Philippines, Brazil, Mexico, Nicaragua, Guatemala, Costa Rica, Panama and Peru.
[27] Busscar is exploring ways to open a plant in Colombia under a similar arrangement.

allowed it to get a contract for Quito's BRT and started to export buses from Colombia earlier this year.

There are other examples of local firms that grew thanks to the new system and now have great opportunities locally and abroad. The firm that developed (through exploratory research) the fare collection system has earned contracts domestically and in Caracas, Mexico and Jakarta. Two of Transmilenio's bus operators bided for and got the operation of three of the five new BRT corridors in Santiago de Chile.

As for the maintenance of the fleet, the different operators do it at Transmilenio's bus depots. They procure large quantities of parts seeking economies of scale while also demanding high quality products (ISO 9000 certifications). Very few manufacturing firms were up to the challenge but they have prospered greatly in this high-end market.

The new system has physically displaced the old one. For each new articulated red bus that enters the Transmilenio system, seven old buses have to be scrapped. To date, 4200 buses have been scrapped as 900 articulated buses currently operate within the system[28].

Additionally, some of the new BRT corridors run where *playas*[29] used to operate (e.g. *Autopista Norte*) and several of the existing ones (most notably, those along *Calle 13*) are bound to disappear as the new system expands.

Nevertheless, the further expansion of the system, in the medium and long term, is far from guaranteed. The national government is committed to contribute with 70% of the infrastructure construction costs. The city's share is guaranteed with 25% of the gasoline surcharge tax dedicated to Transmilenio. But the system has 84 km (out of 388 km) and

[28] Data on the number of scrapped buses are subject to controversy. I am using the most conservative estimate of the STT.

[29] *Playas* are described below in 2.4.

there are funds for another 21 km. Deep disagreements between national and local government over the costs per km are threatening the future expansion of the system (El Tiempo 03/31/06).

1.4. Concluding remarks on Urban Transportation in Bogota

Manufacture and service small businesses that have traditionally supplied with parts and maintenance the transportation system in Bogota are slowly advancing towards formality under state agencies growing stronger and liberalization policies bringing foreign competition. Their low cost products have allowed the informal transportation system to operate under a scheme of low fares and high accessibility. The role of these small firms has been that of contributing in the provision of a service that the State should have provided but that could not due to its weakness.

The entry of Transmilenio has meant that firms that had reached a certain level of experience and professional management were able to enter a larger, globalized market. Meanwhile, the most backward and informal firms are left behind. Eventually, they will have to adapt by going into other markets or simply disappear.

2. Links of the supply chain of small parts for buses

The supply chain allows us to understand how a raw material (i.e. scrap copper) is transformed into a product sold to the final costumer (i.e. bus owners and drivers). The supply chain possesses a heterogeneous mixture of businesses of all sizes and degrees of formality. For the purpose of this study, the supply chain will be divided into four links:

scrap metal collectors (*Chatarreros*), raw material suppliers, manufacturing firms, and retail and mechanical shops[30].

2.1. Large scrap metal collectors - *Chatarreros*

In the hands of a few, scrap copper is a huge yet murky business. Scrap copper comes mostly from replaced or stolen public wiring cables and in lesser quantities from old pans, electric motor parts, and old piping among others. *Chatarreros* buy from petty cable thieves and street scrap collectors—mostly homeless recyclers and *zorreros*[31]. Collection centers consist of multiple smeary warehouses and open lots located within a few blocks in downtown Bogota belonging to a family of *chatarreros*. Each of the different members of a family (e.g. a father and two siblings) manages its own independent business. Yet they collaborate with each other and they all work under the same name (with slight variations for registration purposes).

They have a bad reputation among owners of metallurgical and manufacturing firms of the supply chain. One metallurgical firm from Medellin tried to open a scrap collection center in Bogota but established *chatarreros* waged a price war (dumping). Additionally dealing with street collectors and cable thieves proved too difficult. The enterprise failed after one year.

[30] A previous link to the *Chatarreros* is the homeless recyclers and *zorreros*. It is a sector where taxes are non-existent and ties with child labor, theft, drug trading/consumption and other illegal activities abound. I refer only marginally to them. This is so because making a fair description/analysis of this sector would have required extensive additional work and I believe it would have taken this research too far from its main focus—namely tax compliance of small manufacturing firms.

[31] Scrap collectors that go around the city in rudimentary horse-powered vehicles (called *zorras*) buying scrap from businesses and homes.

Despite the apparent low profile of this business and rumors about its alleged connections to criminal networks—from cable and manhole-cover thieves to car robbery bands—*chatarreros* are powerful businessmen. When selling their material, a single business deal can be worth hundreds of thousands of dollars. They are connected to a global market; they are well informed of international prices[32] and can choose to sell to domestic businesses or to export (mostly to China); the highest bidder gets the material.

2.2. Metallurgical firms (Raw material suppliers)

Here is where the largest firms in the whole chain are to be found. Due to the type of machinery used, their capital investment is vastly superior to that of manufacturing firms: the start up investment for one of these industries is around one million dollars while a small manufacturing firm could start with around US$5.000. There was a monopoly over the market since the 1950—when a firm based in Medellin substituted imports from Germany—up until the mid-nineties when the liberalization of the economy allowed competition to develop (both with imports of raw material and new firms starting up with imported machinery).

They export to neighboring countries[33] (Venezuela and Ecuador). Owners and managers of the two firms visited saw the Free Trade Agreement with the US (TLC) as a great opportunity but they saw Mercosur as a threat. In general, the most feared competition is that of large developing countries like India, China (for their demand of scrap copper), and Brazil (for its supply of raw material—i.e. direct competition).

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[32] They keep connected on a real-time basis to the London Metal Exchange (http://www.lme.co.uk/copper.asp) to adjust their prices.

[33] One business owner had plans to open a plant in Venezuela to take advantage of current taxing policies.

2.3. Manufacturing firms

This thesis focuses on them (see chapter III). Firms of all sizes and degrees of formality compete in this market. In this section, I will only describe their marketing strategies. As described below in 2.4, the businesses that buy from the manufacturing firms can be small or medium/large. For most manufacturing firms, small clients represent the bulk of their sales[34]. Their marketing strategy consists in going from town to town, from one small business to the next not only to offer products to potential clients but also to visit regular clients to collect payments and to get new delivery orders. Most of the transactions are handled in cash. Sales representatives are often in charge of this task but most firm owners believe that no one can do it better than himself or herself. The owner of one of the smallest firms goes to the extreme of loading his car with parts and traveling from town to town doing sales; he takes no orders, nor makes deliveries, he focuses in direct sales.

2.4. Retail and mechanical shops

The businesses that buy from the manufacturing firms represent the most heterogeneous part of the supply chain. They can be divided into large buyers (intermediate wholesalers and large businesses) and petty buyers (retailers). Hence this link includes, on the one hand, large transportation companies that repair their own buses (or trucks), and medium and large hardware stores that distribute the products across the country, and on the other hand, small retail and mechanic shops, and stores that service buses and trucks in the sidewalk in front of their premises. The latter are located in areas known as *playas*

[34] A few (the most formal ones) tend to focus on large buyers only.

(beaches) spread across the city and they can be found in all major cities in Colombia. These areas are located either in wide unpaved roads or in streets with wide sidewalks. There, the buses can park and be repaired *in situ* by mechanics that work in the street. These mechanics borrow parts from the retail stores and pay back once they finish their work and get paid. No contractual labor attachment exists between the mechanics and the retail stores, but a mechanic will only borrow from one store. Given the informal nature of the final consumer (bus owners and drivers) businesses that deal with it tend to have lower levels of compliance with tax regulations.

In short, informality is higher at both ends of the chain and both raw material suppliers and manufacturing firms are 'caught in the middle'.

3. Globalization and liberalization

Besides the changes in the sector brought by the formalization of transportation (Transmilenio) in the city, manufacturing firms face increasing foreign competition and at the same time, greater possibilities of expansion in the context of further trade liberalization. The most notable case is the free trade agreement between Colombia and Mercosur (Brazil, Argentina, Uruguay, Paraguay and Venezuela) signed at the end of 2005 by president Uribe.

Globalization and trade liberalization policies have had additional implications within the supply chain. As noted above, scrap metal collectors can choose to sell in the local market or export to get higher prices for their stuff. Given that the metallurgical firms are large businesses, they have tried to lobby before the national government for trade regulations to protect them from external demand for copper. So far they have been unsuccessful but they are beginning to organize and with the help of the National Association of Industrialists (ANDI) they might build the political clout to have the government protect their interests. Similar efforts by business associations have succeeded in Venezuela and Argentina. This could be good for manufacturing firms and shops as the limited supply (under great demand from China) has tripled the price of raw materials in the past two years, which has translated in higher prices of the final product. Another example of the impact of globalization in this sector (described in 1.3.2) had an American multinational lobbying for protection from Brazilian bus imports. The effort resulted in a joint venture between a Brazilian multinational and a local company.

Conclusions

Rapid urbanization and weak governments (at the national and local levels) allowed informal systems of urban transportation to develop in Colombian cities over the past fifty years. Around them, several domestic supply chains flourished to provide the buses of these systems with the maintenance their owners and drivers could afford. The supply chain in this study is heterogeneous. It includes firms of all sizes and degrees of formality who are facing an increasingly changing scenario. National liberalization policies, enhanced enforcement capacity of tax authorities, and formalization of transportation systems are some the biggest challenges the small firms studied have to face. It is in this dynamic context where the studied manufacturing firms have thrived. I now turn to them.

Chapter III. Small firms: nature and practices

1. Nature of the manufacturing firms

> "The urban informal microenterprise should be viewed as a part of a voluntary small firm sector similar to those in advanced countries that, due to the laxity of enforcement of labor and other codes, is able to choose the optimal degree of participation in formal institutions."
>
> William F. Maloney (2004, p 1173)

This sector, as described in Chapter II, has thrived in parallel with the city's informal transportation system[35]. There are manufacturing firms of all sizes (mostly small and medium) competing in this market. But this sector is specific and possesses fundamental differences with other sectors where small firms proliferate. There are two distinct features of the production process that define the kind of small firms in the sector. First, initial capital investment is relatively large when compared to that of other sectors. At the present time, starting one of these firms requires a minimum of five thousand US dollars to buy a simple manual lathe. This is why the small firms in this study are closer to the dynamics of self-employment of industrialized countries as described by Maloney (2004)

[35] The firms also supply the transportation systems of other major cities in the country. They all have a similar history and institutional dynamic as the informal transportation system of Bogota (described in II.1)

than to more rudimentary sectors like the shoe manufacturers studied by Peattie[36] (1981). Second, this expensive machinery requires relatively skilled labor to operate it. Lathes are complex machines that demand a high level of know-how from the operator. These two characteristics will define the way these businesses are started and from a broader perspective, the entry to the market. Consequently, all firms are started by either a qualified worker[37] that gets the required capital (from his savings or from a capitalist partner) or by an entrepreneur with some experience in the sector that can get the required capital and labor.

There are no differences as to the technology used. The machinery includes both automatic and manual lathes. All firms have the same kind of machinery: big firms have more machines and small firms have fewer[38]. This kind of machinery allows for a wide variety of different products: pieces for auto-parts, motorcycle and bicycle parts, gasoline stoves parts, junctures for domestic natural gas systems, generic small parts for different (non-standardized) uses. This flexibility means that firms not always compete with the same array of products and they try to diversify to produce for other markets. Nevertheless, parts for buses of the urban transportation system seem to be the most profitable since they are the bulk of the production of the firms studied.

[36] "New firms continually enter the industry at a very small scale and with negligible amounts of capital." (Peattie, 1981. p 228)
[37] Skills come from working experience or from technical education (in the Government's technical education programs—SENA—or high-schools with a technical focus).
[38] Firms studied had between two and eighty machines (mostly manual and automatic lathes but also cutters, drills and other metal-mechanical machinery). The average among the ten firms was nineteen machines.

Producing these parts at a higher quality requires larger machinery with a different technology: parts are manufactured by injecting melted metal into molds instead of being lathed out of brass bars. No firm in Colombia (or its neighboring countries) possesses this technology, which would require a significantly larger capital in investment. The size of the market could provide the returns to scale required by investments of this size. Nevertheless, the lack of demand for—more expensive—higher quality parts has allowed for technology to remain unchanged in this sector for over twenty years. Perhaps the new wave of formalization in urban public transportation will provide the necessary demand (in volume and in quality) for such an upscale in production. But as seen in Chapter II, the expansion of the formal transportation might take time.

Demographics of the firms studied

The firms in this study are between two and thirty years old. The average manufacturing firm (among the ten) is nineteen years old. There are all family businesses. Unlike Peattie's shoe-manufacturing sector, where some firm owners had "no interest at all in expansion" (p 214), all firm owners in this sector aim at growth, albeit some being more effective than others.

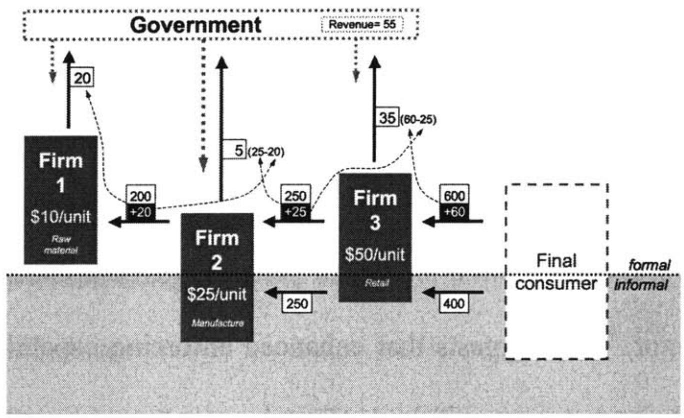
In The Other Path (1989), De Soto showed how endless streams of red tape pushed businesses into informality. His study called for "simplifying and decentralizing the governmental bureaucracy" (p 247). In Bogota this has been partly achieved. The process for registering a business has become easier over the years and now it does not take more than one day. Firms get their ID—RUE (Registro Unico Tributario)—from the Chamber of Commerce of Bogota (CCB), a highly efficient semi-private organization.

Additionally, all businesses (even the smallest) and individuals in the labor market now have a tax ID number. In the case of businesses that must pay the VAT the ID is the NIT (Número de Identificación Tributaria), and for businesses that are not required to pay the VAT and for common people the ID is the RUT (Registro Único Tributario). Paperwork to obtain these IDs is simple; for example, the application for RUT can be filled and submitted online. Additionally, submitting a tax return and paying can be done at most banks and does not take longer than any other bank transaction.

Considering the simplification of procedures for formal registration, the perceived high degree of enforcement capacities of tax authorities, and the specific nature of the firms studied (high initial capital investment and use of skilled labor), it is not surprising to see that, in the context of this study, all the firms are registered[39] and comply with tax regulations—albeit in varying degrees. There was not one that was completely informal or 'out of the radar' of authorities. This shows how thin the division between the formal and informal sectors can be, or better yet, how it is a continuum rather than a clear line. This is coherent with Tokman's (1992) finding that "most [businesses] are found in the middle of the continuum" (p 5). Thus, firms with different levels of compliance operate, compete, and transact in this market. This raises a number of managerial challenges. For instance, as described in II.2, it is in both ends of the supply chain (*chatarreros*, and retail and mechanical shops) where the highest levels of informality can be found. Manufacturing firms can sometimes find themselves in an awkward intermediary position where raw material suppliers are formal and many of their buyers are informal. This asymmetry can be challenging from a managerial perspective. The following is modified

[39] The fact that all firms in this study are registered could signal a bias in the sample (see Methodology section in the introduction chapter). Nevertheless, it is surprising that in this study even the smallest firms with the lowest levels of compliance with VAT are registered.

version of the stylized diagram presented in chapter I of a supply chain of three firms producing twenty units with a ten percent VAT. It shows how a firm (Firm 2) can buy all its inputs formally and at the same time sell half of its production without an invoice. While its real value added is 300, it ends up declaring only 50 (that is, 250 of product sold minus 200 of inputs).



Example of unevenly formalized supply chain of 20 units - mixed levels of compliance with the VAT (three firms, production of twenty units with a ten percent VAT)

The owner (or the firm's accountant) must be skilled to handle the imbalance of paying the VAT on all its raw material purchases and selling a share of its production without an invoice (gray area in the diagram). If not handled properly, the VAT paid can become a cost of production, reducing profitability margins for that year. One of the firms visited was on the verge of bankruptcy because of poor accounting/planning; the firm bought all of its raw material with VAT but sold most of its production without an invoice. Thus it was not able to collect the rebates on inputs, carrying the full burden of the VAT paid to the supplier. Thus, partial non-compliance can directly become more expensive than compliance.

It is important to note that, although the VAT legislation is very complex as a whole (as seen in I.3.3.), firm owners are informed of what their tax obligations are. The complexity noted on the first chapter refers to the entire system and its "excessive rate differentiation" (Bird et al., 2005). This is a view of the system from above, important for tax administration and reform. In contrast, from below—i.e. from the perspective of a firm that specializes in a specific product—the rates and procedural requirements of the VAT for the inputs and outputs are easily learned. Again, the chained structure of the VAT helps spread information on obligations and requirements.

Finally, it is noteworthy that from a long-term perspective, compliance has been slowly growing in this sector. This suggests that enhanced enforcing capabilities of the DIAN have allowed the chained structure of the VAT to have an incremental formalizing effect within a supply chain.

2. Practices of small firms

As seen above, in this sector there are no firms that are completely informal. On the one hand they all are registered in the CCB registry and have a tax ID number. On the other hand, most of them maintain a portion of their business 'under the table' with accompanying double accounting practices. Such practices tend to consume a lot of efforts from managers and accountants. Thus, and contrary to some of the literature on the informal sector and the VAT reviewed in I.3.1.2., it is neither inexperienced management nor inability to cope with the managerial expenses what keep firms from complying. Non-compliance is itself more *complex* and *expensive*. Yet non-compliance is widespread. This apparent contradiction has several explanations.

In the following section, I disaggregate the rationales for business practices (as expressed by firm owners and managers) in three different groups: non-compliance, transition and compliance. Although separated for the purpose of analysis, it is a bundle of them that shape a firm owner's decisions. They can be seen as the variables of a complex equation that determines the level of compliance of a firm with the VAT.

2.1. Reasons for *not complying* with the VAT

2.1.1. *Rational choice*

There are two justifications for informal transactions (without an invoice) that stem from a conscious (rational) choice. They could easily be seen in the light of the economic literature on tax compliance (as mentioned in I.1.).

- *To avoid loosing comparative advantage*

Not paying taxes gives a competitive edge over other firms. This is a textbook case of free-riding. One owner declared that a friend, owner of a competing firm, complained to him for having too large of a share of his sales under the table and thus becoming an unlawful competitor. He answered that non-compliance was his comparative advantage and that he knew he risked losing his business if the DIAN caught him. Thus, there is room in the market for firms that base their competitiveness on practices that are risky in the context of a country with some enforcement of State regulations (in this case, tax and labor regulations). Nevertheless, this owner had been in this business for over twenty years. This goes in line with some common beliefs on the informal sector and Peattie's (1980) finding of the perception by more formal business of "the threat [of] smaller 'pirate workshop' which can produce more cheaply by remaining inconspicuous and avoiding" (p 228) legal obligations.

- *To avoid loosing customers*

Contrary to the more proactive argument described above, there is also a reactive reasoning. Paying taxes can represent a change in the way business has been carried out for years. Some firms, despite serious efforts to legalize all transactions, maintain a portion of them off-the-record to keep from loosing stubborn clients. At first sight, this fear appears to be well founded. One of the firms lost over 120 customers[40] (out of 700), as a result of formalizing all its transactions (see III.2.2.3.). Nevertheless, they were all small clients and the owner perceives the loss as not harmful in the long term: the volume of sales foregone was relatively small and the firm saved the managerial and accounting costs entailed by doing business with tens of small clients.

2.1.2. *Demand from clients and indifference toward regulations*

Small firms often do not declare a fraction of their sales because clients ask for deals off-the-record. One firm owner stated that he wanted to move towards higher compliance but he believed it was improper for him to suggest to his clients that things should be done differently—i.e. use an invoice. To some extent this reason is similar to the previous one (to avoid loosing customers) but in this case the perception on the part of the firm owner

[40] Clients that sell without tax in order to provide lower prices to the final consumer.

that it would be improper to even suggest a different arrangement signals to a degree of indifference toward regulations. It could be assimilated to the old "what the client asks, the client gets" rationale. He does not fear loosing his client because his does not even consider suggesting a different arrangement and he does not see it as his competitive edge because he can use an invoice if he is asked to. In short, what leads to non-compliance is more a willingness to accommodate his client more than a rational motivation to cut corners.

2.1.3. *Being used to doing business in a certain way*

Owners get accustomed to a certain way of doing business and see change as troublesome. This path-dependence can allow them to resist growing external pressure (both from the tax administration and from suppliers and/or buyers) to formalize.

2.2. Reasons for *starting to comply* with the VAT

2.2.1. *Fear of sanctions*

A seen in I.2, over the past forty years, the Colombian Tax Administration (DIAN), has grown both in size and in resources. Its enforcing capabilities, although far from those of an equivalent agency in a developed country, have improved considerably[41]. The DIAN has today a strong presence in the mind of business owners. As this agency grows and becomes a stronger enforcer, firms are more prone to complying. All firm owners

[41] Despite the information gathered about this agency, the reasons behind its relative success (when compared to similar ones in the developing world) are beyond me. This could be the subject of further research.

perceive a high degree of non-compliance in their sector but they agree that the DIAN is not to be taken lightly. This perception can be explained by first-hand experience of firm-owners in the sector. Three firms (out of ten) had had problems with tax authorities: two of the firms had to bribe visiting auditors, and the other firm reached a legal agreement to pay off the debt.

In short, beyond issues if corruption or actual effectiveness of audits, the DIAN is perceived as capable and present enforcer among these small businesses. The enforcing capacity of the tax administration (despite being underfunded, and to a certain degree corrupt) is, as expected one of the main factors in determining the level of compliance of a firm.

2.2.2. *New management: a new generation*

All firms studied are family businesses and are around twenty years old. Accordingly, in several firms a new generation is taking or has taken over their management. This second generation of family managers is better educated (all college graduates) and has fresh ideas for the business. It is here where a struggle to formalize unfolds most clearly. These young professionals find that their ideas for new ways of doing business have to confront the old ways and often its consequences too. For example, a young engineer that took over his father's firm had to negotiate with the DIAN after an audit and has been paying for four years the debt of overdue taxes that his father left. He pays in order to keep the DIAN from seizing his business.

2.2.3. *Formalization of work inside the firm*

Managerial upgrading can translate into higher levels of compliance. Reorganizing a firm's production and administrative structures can make tax evasion a liability. In such process, it becomes evident how non-compliance with tax regulations can jeopardizes the firm's future.

This was the case in a firm that underwent the process of quality certification (ISO 9000). The owner hired a managing consultant from the CCB that would visit the firm every month for over two years. The consultant would make recommendations on how to reorganize both the production and the management/accounting structures of the firm[42]. One of the steps of the upgrading process included the creation of a long-term business plan (strategic planning) for expansion of the firm. In that scenario, balanced books and good credit standing were needed to access a bank loan. It is not enough to be registered before the CCB and to have registered property rights over the plant's building and machinery. When businesses seek formal credit, they need to show they are profitable, well organized and have potential to grow. All of this appears in the firm's books. Double accounting usually makes the inventories 'on the books' behave in an erratic manner and profits to appear as low or non-existent. The owner himself believed it was the firm's internal reorganization that pushed the firm into higher levels of compliance.

In contrast, another firm, where the second generation was taking over, managed to become more productive (reorganize its production, augmented its sales, improved debt recovery) but kept a short-term vision of business and maintained a sizable share of its transactions under the table. Despite the fact that gross income augmented, all eventual profits were being consumed by the high interests rates of loans taken from private lenders. Applications for formal credit were rejected due to accounting records that

[42] The consultant's services are not cheap and its recommendations are taken seriously.

showed a company with poor performance. The owner decided to come forward and explain the situation (high non-declared revenues being consumed by the interests of informal loans) to the bank manager with no luck. Formal supply of capital was there for a firm of that size, but the legacy of informal practices prevented the firm from gaining access to it. Thus, non-compliance reduces a firm's chances to grow and threatens its survival.

Additionally, as will be seen in the following sub-section, the level of compliance within a single transaction is subject of bargaining between the firm and its client, which makes standardization of administrative procedures—one of the bases of managerial upgrading—impracticable. Each transaction is somehow unique and demands full attention from owners and accountants. This is consistent with some of the impressions I got on the firms while carrying out my interviews. In quality certified, more formal firms, managers and owners seem more relaxed and were able to have 45 minute uninterrupted conversations. Contrastingly, owners of smaller more informal businesses seemed overwhelmed by work and were constantly interrupted; everything has to be run through the owner. Upgrading provides order to both production and managerial structures within the company and assigns clear tasks to each employee. The hierarchy is explicit and the owner does not have to deal with all the petty issues of the day-to-day operation of the firm.

2.2.4. *Demand from clients or suppliers*

In several cases, it was clients that pushed for a more formal way of doing business –i.e. started asking for invoice. But once again, the division between formality and informality, even within a single transaction, is a continuum. Firms not only have clients with whom they do all their transactions with an invoice and others with whom no invoice is used. Firms often bargain over the percentage of the purchase order that will be made off the records. Again, this provides an image of how complex, from a managerial point of view, partial non-compliance can be[43]; a single purchase (that is shipped within a single box) has to be divided into two separate transactions from an accounting point of view. Keeping track of this double accounting within a single transaction is a demanding task.

2.3. Reasons for *complying* with the VAT

There were businesses that had always been formal in their transactions and others that achieved 'complete' formality over time. Their answers included *fear of sanctions* (explained above) and:

2.3.1. *Being used to doing business in a certain way*

The same reasoning for non-compliance (in 2.1.3.) also applies for compliance. Two firm owners stated they had always done business in a lawful manner. They both had moved from formal companies (the first from a large business in this sector, the other from a large oil multinational) to open their own small business, a common practice in both industrialized and developing countries (Maloney, 2004). Both saw non-compliance as an unnecessary complication. Their compliance appeared to stem more from a pragmatic consideration or a simple custom, than from being in a 'moral higher ground'.

[43] I am assuming that under absolute non-compliance bargaining is unnecessary and accounting is simpler, in other words, transaction costs are lower.

2.3.2. *Ethics*

Only one owner declared to have a moral/civic (somewhat abstract) obligation to comply. He is a minority and unlike the previous category his compliance resulted from a more conscious process. Not even in this case was there a connection made between payment of taxes and investment by the State in public goods. He saw compliance with taxes as abiding a law not as contributing to social welfare. In short, not even in this case was the connection between collection and expenditure of taxes by the State made.

In short, in the sector studied, both external actors (tax agency, clients and suppliers) and internal processes (ethics, culture, upgrading) have an effect on a firm's level of compliance.

3. Nature of the sector

3.1. No business association

As for other aspects of their business practices that define the nature of the sector, one that is notorious is the lack of organization within the sector. Firms are not organized and receive no help from the government or any other organization. There used to be an association—Asometal—but it disappeared for lack of affiliates. There is deep mistrust among competing firms. All firms that provide parts for the urban transportation market manufacture the same products (no differentiation), and firm owners zealously guard information on their businesses; for example, lists of prices are to be kept secret from their competitors by their clients (retail stores and mechanical shops). This points to poor production management. A firm owner had recently, and for the first time in years, made a thorough production costs study—not an easy task considering that the firm produces over a thousand different types of parts[44]. When he compared his prices with those of other firms (including larger firms) he noticed wide differences in both directions, some pieces were overvalued others were undervalued. This would suggest that given that they all use similar machinery, prices are established over time in trial-and-error basis.

3.2. Exports

This market is not restricted to domestic demand. There is demand for low/intermediate quality parts in other countries of South and Central America. Most of the firms visited currently export to neighboring countries (Costa Rica, Venezuela, Panama, Ecuador). The nature of the products allows for an individual order from a client to fit in a small box. This way it can be shipped easily through regular mail without fulfilling any of the legal requirements to export or pay any taxes. This informal export is a common practice among most firms but it represents only a small share of their sales.

Two of the firms visited were starting to move in a different, more formal direction. The first was starting to make small shipments to Venezuela with all the legal requirements. It was the son of the owner (a college graduate) who took the initiative. He complained about the cumbersome amount of red tape entailed and the low profitability of those transactions. He was doing it formally only to gain experience and to build an exporting portfolio for future ventures in the framework of the TLC (Free Trade Agreement with

[44] A lathe can produced hundreds of these small parts per hour. Although firms handle over a thousand of references, a machine can work all day producing a particular reference to provide the firm with enough inventory to cover the sales of several months. Thus a small firm with only two machines can respond to this demand for thousands of different parts.

the U.S.). It was a long-term view that pushed him to do so, for he sees the future of the company in the global economy, exporting to larger markets like the U.S.

The second firm had just joined a program from a semi-private organization (CAFAM) called *Pequeños Exportadores* (or Small-exporters). Again, the firm joined the program as part of its long-range plan, which aimed at achieving a higher percent of the production exported.

It is noteworthy that the businesses that were moving in this direction were larger and more formal. This type of firms sees the TLC and trade liberalization policies in general as new possibilities for expansion of their business. Nevertheless, these long-term plans seemed to be based on vague perceptions of foreign markets more than based on concrete studies, visits, or actual connections with eventual clients. More than anything, they represent a willingness to jump to a larger market in a globalized economy.

Conclusions

In the context of Colombia, a certain degree of enforcement and reduction of red tape, have led business across sectors to register. The manufacturing firms in this study are registered and pay at least some of their VAT. Within this environment of partial formality, high costs of compliance are not keeping firms from complying. On the contrary, partial non-compliance is more complex and expensive than compliance itself both in the short term (increasing managerial and accounting costs—and in cases of poor management—greatly increasing production costs) and in the long term (hindering access to formal credit). In a dynamic context of constant change, both external and internal factors will determine a firm's decision to comply. External actors relevant to a firm's compliance with the VAT belong to both the State (tax administration), and the market (clients and suppliers). Internal processes that influence a firm's decision to comply include moral principles (ethics) and customs of firm owners, management changes, and production upgrading.

Chapter IV. Lessons and Guidelines for Policy

1. Lessons

The following three lessons are drawn from small firms that manufacture small parts for buses in Colombia, but they can be applied to other contexts or at least can help to qualify the discussion on broad topics such as taxation in developing countries, the informal sector, and small firms.

Partial non-compliance is more expensive than compliance

Although the VAT legislation is complex as a whole, small firm owners are most of the time fully aware of their duties, responsibilities, and liabilities. The fixed costs entailed by compliance are high for small firms (see I.3.1.2.) but they do not seem to impair compliance in the sector studied. Managerial and accounting costs of compliance appear to be well within reach especially when one considers that all firms with a degree of non-compliance (a majority in this sector) have double-accounting practices. In that scenario, maintaining a firm's books balanced in order to avoid increasing production costs or just problems with tax authorities is a demanding task. It requires skillful management and planning and careful accounting. In that sense, because of these extra managerial expenses (and in some cases production costs) partial non-compliance with tax regulations is more *complex* and *expensive* than compliance itself. Keeping two or three sets of accounting books requires additional efforts from managers and accountants, which makes non-compliance costs higher than compliance costs in the short run. But these practices also imply higher costs in the long run (explained below).

Formalization is not a consequence of growth

As described above, the small firms studied have varying degrees of compliance with tax regulations, that is, they have formalized to different degrees. The level of compliance wit the VAT varies from one firm to the next. Nevertheless, contrary to a conclusion often reached in the literature on the subject, I did not find that "firms do become more formal with age and size" (Maloney, 2004, p 1168). Most of the firms in this study were in average nineteen years old. Among them, there are firms of all sizes with high or full compliance with the VAT (black triangles in the graph below). Among the older ones[45] in this group, some have succeeded (i.e. they grew) and others have not[46]. Firms with medium or low levels of compliance (empty and shaded circles in the graph below) with the VAT were all small except one that was medium (30 employees). The only medium firm in this category, had overwhelmed management, no room or capital to think about expansion and was struggling to avoid bankruptcy—heavily burden by the interests of informal loans[47]. This means that firms can only grow when they are formal, independent of their age. That is, formality is independent of the firm's age and is a *prerequisite* and not a consequence of growth.

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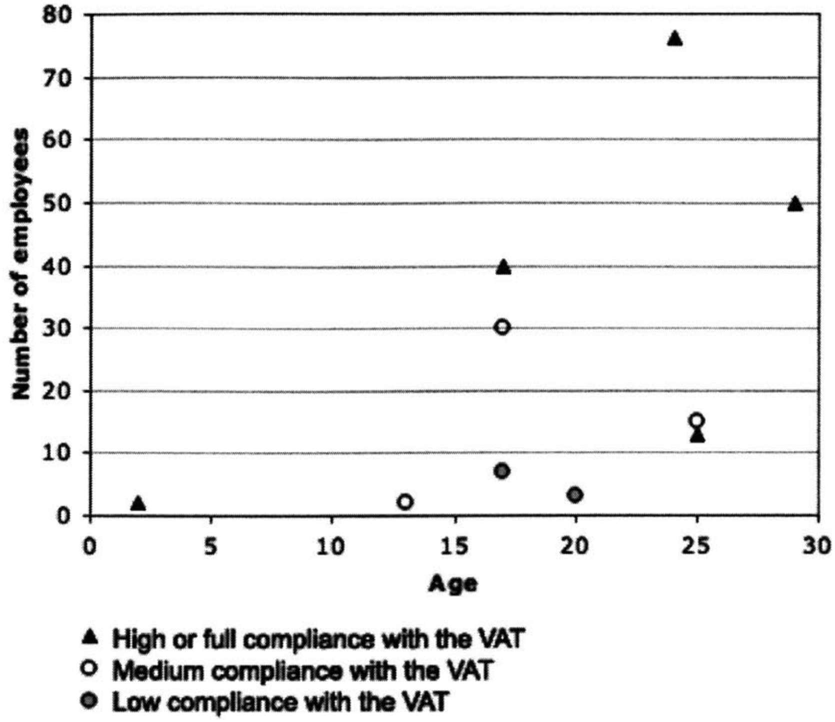
[45] There was also a recently created firm that despite being small (only two employees), maintained full compliance with the VAT (see III.2.3.1.).

[46] This is consistent with the dynamics of small firms studied by Mead and Liedholm (1998).

[47] This firm would represent the "roof" of the informal strategy.



Scatterplot of the firms studied by age and number of employees (as a proxy for size)

Nevertheless, given that when a second generation takes over, a firm tends to move towards higher compliance (described in III.2.2.2.), necessarily there should be (in the long term) a correlation between a firm's age (not size) and how formal it is. This tendency appears to be true for some of the firms in this study that are just starting to make that change. Nevertheless, it is a change disjointed from the trajectory of the firm up until that point. It only comes after decades of operation and only in families where the second generation on the one hand, is educated, and in the other hand, cares about the family business. Thus, it is not a spontaneous consequence of age or size of the firm but of the nature of some family businesses.

Non-compliance hinders growth

One possible explanation for the described relationship between growth and compliance would be the limited access to the formal capital market of firms with higher evasion of VAT. In this sense, the findings of this research would appear to be in line with those of De Soto (1989, 2000). Nevertheless, De Soto's recipes to trigger development through formalization[48] are to some extent already in place in Colombia (as seen in III.1.). Owners of firms have legal tenure of the buildings where they produce and of the machinery with which they produce. Businesses (even small ones) are registered before the CCB and the DIAN. Their problem does not lie in the lack of collateral or of acknowledgement of existence by the formal system. When grating credit to a firm, a bank not only seeks collateral (which firms have), but also good business performance. VAT evasion makes inventories of firms behave erratically "on the books" and profits seem limited or non-existent. This translates into a not always accurate picture of poor business performance (low cash flows, small or no profits), which in turn limits their access to formal credit.

One would think that this could work as an incentive for business owners to move towards higher compliance. However, the lack of a long-term view of business that placed the firms in that situation in the first place, also makes them seek a short-term solution; firm owners (often pressured by the need for investment or working capital) recur to private lenders. These lenders charge monthly rates of 5% or more (over 70% yearly rate, compared to 19% yearly rate in the formal capital market). Thus, firms often

[48] Recipes include reducing red tape and removing legislation that impedes business from registering and fulfilling their legal obligations (de Soto, 1989), and granting legal titles of property so that assets can be used as collateral (i.e. become capital) and thus provide access to formal credit to millions of people (De Soto, 2000).

drag with high financial costs that in turn limit their chances of growing. In short, *VAT evasion tends to undermine a firm's ability to grow.*

In this sense, enhancing tax compliance in these 'hard-to-tax' sectors should become a priority for governments, not only in order to increase their tax revenue, but also to promote economic growth. It is to how to do this that I now turn.

2. Guidelines for policy design

The following are not precise recommendations for specific programs within a given agency or ministry. They are broad lines of action from which organizations at different levels of government (or donor agencies) can draw when devising programs for the Colombian case. I put forth guidelines that can help improve *voluntary compliance* and marginally improve enforcement through policy.

2.1. Improving voluntary compliance

Engage compliers

Given that providers and buyers influence a firm's decision to comply with the VAT, raise awareness on how other firms' non-compliance is hurting everybody. This goes beyond using peer-pressure since (as seen in chapter III) external actors can effectively drive firms into compliance. A somewhat similar effort was implemented by the DIAN in a public campaign against smuggling. The campaign revolved around data on the impact of contraband on the level of unemployment in the country (people going out of business because of unlawful competition from smuggled goods). The connection brought forth the invisible negative social and economic consequences of purchasing smuggled goods.

Support upgrading

Promote upgrading and ease the transition of family businesses into professional management and upgrading in general. Promoting—and even subsidizing—firms to obtain quality certifications (ISO 9000, 9001, etc.) would not only translate into lower VAT evasion but also help improve the competitiveness of the sector within the context of ever-widening trade and capital liberalization. The State can draw from the experience of existing programs of the business-administration consulting sector—e.g. CCB, quality certification consulting firms. Such programs include not only upgrade consulting but also outreach, orientation, and diagnosis activities.

Favor earmarked taxes

The explicit connection between tax and expenditure strengthens the social contract. Such taxes are easier to implement at the local level. Experience on the *Cobro por valorización* used in Bogota to finance infrastructure locally can be a steppingstone to implementing similar charges for other investments (e.g. security, road maintenance).

Develop a tax culture

This would be a broader recommendation, that is, beyond the context of small firms. Awareness raising campaigns can help move citizens beyond a perception of 'taxes for taxes sake' into taxes as contributions to the common good or even as social solidarity.

Past efforts should be revisited. Two salient examples were the programs to develop a tax culture of the Mockus administration in Bogota between 2001 and 2003. One of the programs was the *Chiva Tributaria*. It consisted in taking (with wide media coverage) top executives of large businesses—i.e. the largest taxpayers—to impoverished zones of the city where the local government had built large public schools with the highest architectural and construction standards to provide the poorest children of the city with free education with the highest academic standards. It aimed not only at connecting collection with expenditure but also at emphasizing the highly redistributive structure of the tax structure in the city. The other program was called *110% por Bogota*, which allowed taxpayers to make a voluntary contribution of an additional 10% over the regular local tax return (land and corporate) while providing the option to direct the additional contribution to a specific program or project. Over the past four years, over 140.000 taxpayers of all sectors (poor, rich, households and businesses) have contributed. Nevertheless, a caveat of these programs is that they took place after a decade of increasing efficiency of the local government. The vicious circle that weakens the social contract (described in I.1.2.) was starting to reverse.

A note on Tax Culture

The ultimate goal should be State reform towards more participation and engagement from citizens around tax and expenditure issues. I believe tax culture is a foundational matter to a nation. It is not a question of citizens being "happy" about paying taxes. A civil society publicly engaged around tax issues, can enhance accountability and governance. This will lead to a more efficient and legitimate State[49]. The DIAN (Colombian Tax Administration) should take an active role in education to develop a tax culture in the country. Given its potential contribution to governance, the DIAN should

[49] Additionally, and beyond this philosophical consideration, as seen in the previous section, non-compliance hurts a firm's chances to grow. Promoting tax culture to enhance compliance could be in itself a strategy to promote economic growth.

work in coordination with (and draw resources from) other State institutions as the planning department, the Office of the Vice-President and local governments.

2.2. Improving enforcement

Audit of supply chains, not just firms

A way to improve enforcement with the limited resources available could be to adopt a supply chain perspective to visits and audits by tax inspectors. Given the chained structure of the VAT, approaching entire supply chains instead of individual firms could make auditing more thorough and effective. Recent technological improvements within the DIAN to consolidate information—such as the integrated fiscal information system, MUISCA (DIAN, 2004)—could make this a feasible task, although a technical evaluation of this proposal is needed. Nevertheless, the mere announcement of such a measure could entice buyers and sellers to impose compliance on other firms.

Taking into account the budgetary and institutional limitations of the DIAN, the Colombian State has more room to improve compliance of small firms with the VAT via promotion of voluntary compliance—where many actors within the government and in the civil society can get involved—than through mere enforcement. Moving in that direction can have significant positive externalities such as improving governance and in a broader sense in constructing a stronger social contract (CFS, 2005).

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