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Political Competition in Dual Economies: Clientelism in Latin America

Angela M.Rojas*

1. Introduction – 2. Clientelism, Informality and Development Traps: Notions, Evidence and Relationships – 3. A Static Model of Political Competition with Clientelism and Informality – 4. Discussion of the Model Insights

Resumen:

Este artículo presenta el proyecto de investigación que intenta iluminar los mecanismos que vinculan el clientelismo con la informalidad. En particular la investigación se concentra en las interacciones que tienen lugar durante la competencia electoral e intenta proporcionar un marco analítico para comprender los mecanismos económicos subyacentes en la competencia electoral en América Latina. Esta competencia está caracterizada por asimetrías entre los políticos (credibilidad y habilidad para movilizar votantes) y asimetrías entre los votantes (ingreso y participación en cierto segmento de la economía) ambos inmersos en un ambiente de baja calidad institucional (débil imperio de la ley). El artículo expone la evidencia empírica que motivó la investigación, discute los conceptos y literatura centrales y presenta un ejercicio exploratorio basado en el modelo de votación probabilística como un punto de partida en la formalización del problema. En esta primera aproximación se muestra que el político clientelista en el poder puede proveer más bienes públicos cuando su maquinaria política es suficientemente rentable y la sociedad es altamente inequitativa. En la medida en que el político entrante tiene su nicho en los votantes ricos quienes demandan bajos impuestos, el político clientelista redistribuye más ingreso aunque a costa de una mayor informalidad.

Palabras clave: maquinaria política, clientelismo, política redistributiva, dualidad, informalidad, modernización económica, América Latina.

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Abstract:

This paper presents a research project aimed to throw light on the mechanisms linking clientelism and informality. It particularly focuses on interactions between these phenomena at electoral competition. It intends to provide an analytical framework to understand the economic underlying mechanisms of electoral competition in Latin American countries. This competition is characterized by asymmetries between politicians (credibility and ability to mobilize voters) and asymmetries between voters (income and participation in a certain segment of the economy) amidst an environment of low institutional quality (i.e. weak rule of law). The paper provides the motivating empirical evidence, discusses the main concepts and literature, and finally advances an exploratory exercise built upon the probabilistic voting model a starting point in the formalization of the problem. In this first approximation, it is shown that the clientelistic incumbent would provide more public goods if his machine politics is profitable enough and the society is highly unequal. To the extent that the entrant politician has her political clout in richer voters that want lower tax rates, the clientelistic politician is more progressive in redistributing income although at expenses of higher informality.

Key Words: Machine Politics, Clientelism, Redistributive Politics, Dualism, Informality, Economic Modernization, Latin America.

JEL Classification: D72, O17, O54, P17

1. Introduction

Recent studies of the World Bank on the economic performance of Latin American are titled "*Inequality in Latin America and the Caribbean: Breaking with History?*" (2004) and "*Poverty Reduction and Growth: Virtuous and Vicious Circles*" (2006). These titles refer to diagnoses of a bad social equilibrium in the region in which inequality and institutions that hamper economic growth are sturdily entrenched. Also they point out that the historical legacy of the region greatly contributed to structure unstable democracies wherein the egalitarian ideals of liberal thinking have been elusive. Instead development/poverty traps, or vicious circles have prevailed.

Nevertheless, these analyses state that institutions can be changed and that path dependency could be turned around through policymaking. One decade of economic and political reforms in Latin American, the promising 1990s, was a first step in building better economies and sound democracies. Yet, these reforms proved to be insufficient and revealed the complexity of breaking vicious circles as well as the poor understanding of reformers.

Not surprisingly, unlocking development traps demands to shed more light on the interaction between politics and economics. This research was conceived under this belief and the observation that in the last two decades, the region has experienced a renewed resurgence of particularistic redistribution in politics as well as an increase in Informality. These phenomena raise serious concern because they hamper the progress that the region has achieved since the toxic 1980s leading to higher inequality, populism and political instability.

On one hand, particularistic redistribution in politics, which in Latin America I identify with clientelism, undersupplies public goods and concentrates political competition on targeted rewards and spending. Also, the reliance on patron-client networks delays the process of democratic maturity as low degrees of political coordination among voters remained and political accountability stays remote. On the other hand, a large Informal sector concentrates an important proportion of agents in low aggregate productivity and small scale activities, with low technology, and rigid constrains on human capital accumulation and credit access. In addition, Informality undermines the state capacity via lower tax collection and poor checks and balances from citizens.

In this analysis I argue that clientelism and Informality have a double-way relationship interacting through the quality of institutions that they jointly structure. First, clientelistic politics manifests itself through large and inefficient burocracies, and state corruption which translate into high opportunity cost of tax and business regulation compliance for citizens. In this line of reasoning, clientelism encourages Informality. Second, Informal agents, especially those that chose to "exit" the formal system (not those who are excluded) and do not internalize the costs and the benefits of a good government, have incentives to vote for clientelistic politicians. These politicians base their electoral support on the individual redistribution of rewards instead of policy platforms because those rewards are the only credible policies in a context of failed government. In this line of reasoning Informality encourages clientelism.

This research project aims at throwing light on the mechanisms that link these two phenomena. In particular, I focus on the interactions between clientelism and Informality in electoral competition. The general objective is to provide an analytical framework to understand the underlying mechanisms of electoral competition in developing countries. This competition is characterized by asymmetries between politicians (credibility and ability to mobilize voters) and asymmetries between voters (income and participation in a certain segment of the economy) amidst an environment of low institutional quality (i.e. low rule of law). The specific objective is to provide empirical evidence on these mechanisms for some Latin American countries.

By focusing on electoral competition, I explore the intuition that clientelism could depress political competition. Thus, elements as the supply of politicians/parties, entry barriers and biases in electoral strategies that entrants face when contesting clientelistic incumbents are examined. Mechanisms that encourage political competition would pave a sounder way to development. By bringing Informality into the picture, I investigate under which conditions a dual economy sustains clientelistic politicians in office. In this way, the economic incentives and conflict among the demand side of politics, that is, voters are enriched. Informality in its “exit” side has been studied as an economic choice in a context of low state enforcement and low tax morale. Emphasizing this side of the political exchange would highlight individually rational but collectively harmful attitudes of Latin American citizens before their development traps.

Specifically, the problem of Informality can be seen as a coordination problem because voters find the exchange with clientelistic politicians individually optimal. However, this exchange is collectively harmful as it leads to negative externalities like selection of bad politicians, bad institutions and underprovision of public goods. This research analyzes the role of elections as coordination mechanisms and its connection with the Informality trap.
The paper develops as follows. Section two introduces the concept of , literature review and some empirical facts on clientelism and Informality, which leads to identify the research niche of this project. Section three provides a static model of electoral competition that captures the interactions between clientelism and Informality in a simple set up as a starting point in the formalization of the problem. The model builds upon the probabilistic voting model developed by Persson and Tabellini (2000) and Robinson and Verdier (2003). Finally section four briefly discusses the insights of the model.

2. Clientelism, Informality and Development Traps: Notions, Evidence and Relationships

In this section these two concepts are discussed, along with the literature review and some related facts on the Latin America’s experience. The goal of this section is to build the conceptual framework of this research project.

2.1 The notion of Clientelism

Clientelism is defined here as an *electoral political strategy whereby a candidate or party offers a reward to an individual voter in exchange for his/her electoral support*. This exchange is direct and based on excludable benefits and services. Clientelism includes practices as patronage (public sector employment), vote buying, deliberated omission of law enforcement, and personalistic grants of public contracts, among others.

It is a self-enforced two-sided relationship in which both parties make a cost-benefit analysis when entering in the exchange. Patron and client obtain a reward in the exchange and when the patron's extrinsic motivations are stronger than his/her intrinsic ones, the rent-extraction behavior brings into scene the agency-problem. Futhermore, given that the clientelistic exchange is voluntary, problems of commitment are at the very heart of the relationship since both the candidate and the voter could find beneficial to renege on their promises. Thus, a persistent clientelistic exchange implies a repeated interaction that sustains each side's reputation and its self-enforcement. This interaction manifests itself through clientelistic networks which guarantee the direct contact between the patron and the client and create informational advantages to the patron. As these networks facilitate voter monitoring and electoral mobilization, they confer advantages to clientelistic incumbent over non-clientelistic entrants. These networks are in charge of taking care of "core supporters".

Clientelism is pervasive in poor countries suggesting that this two-sided relationship is more likely to occur with asymmetric exchangers. Whereas the politician (patron) uses his/her higher status, power or resources to gather political support, the voter (client) finds the patron's favors beneficial most of the times. In this regard, clientelism poses a serious barrier to political competition in which challengers must break off the mutually beneficial clientelistic relationship and make appealing offers to voters.

Clientelism differs from targeted spending or special-interest groups politics, common also in developed countries, because in that exchange voters show certain degree of collective action to act as a group and obtain a higher leverage in politician's strategies[†]. In contrast to the clientelistic exchange, the asymmetry between politicians and voters is lower and the institutional setting may provide some level of enforcement of electoral promises. In this setting, the commitment problem is less severe and voters can coordinate on strategies like lobbying or retrospective voting to address the political outcome, limit the rent-extraction or encourage political competition among candidates.

Thus, clientelism blooms in weakly institutionalized environments where citizens face high costs to coordinate their actions and politicians are poorly constrained. Clientelistic networks appear as a mean to overcome voters' political mobilization problems and politicians' commitment problems insofar as they channel citizens' demands to meet them with politicians' supply. In this line of reasoning, Keefer and Vlaicu (2008) show how

[†] Piattoni (2001) points out that the electorate at the lowest level of aggregation of preferences (no collective action) is the natural niche for clientelistic politics.

patronage networks can bring more efficient policies than those obtained under retrospective voting and total lack of commitment.

However, clientelism and interest-groups politics –or targeted spending, belong to the realm of particularistic/redistributive politics. Some scholars identify clientelism with the entire realm allowing certain degree of organization among clients whereby they obtain favors from politicians who could be punished and made accountable although imperfectly. Others like Robinson and Verdier (2003) define it as "a style of redistributive politics". Yet, a country could have a mixture of both of these phenomena at different levels of government or regional districts such that a clear distinction between "pure clientelism" and interest-group politics becomes dubious. The institutional context ultimately determines how pervasive particularistic politics is by setting the constraints for political competition, collective action and accountability.

2.1.2 Literature Review on Clientelism/Redistributive Politics

Clientelism has been the object of study of initially anthropologists and then political scientists. There is an abundant literature mainly based on case studies. See Piatonni ed., 2001; Shaffer ed., 2007, and Kitschelt and Wilkinson, ed., 2007. In general, this literature does not include formal models but an exception is Geddes (1998), Medina and Stokes (2002) and Medina (2007). The last two references conceptualize clientelism as political monopoly.

A renewed interest on this phenomena emerged since 1990s due to a perceived resurgence of particularistic politics. Recent studies point out the resilience of clientelism before social transformations in developing countries. The surveys of Roniger (2004) and Stokes (2007) provide the main insights of a literature characterized by little attempts to systematize and operationalize the concept of clientelism. Consequently, the agreement over what could be seen as clientelism as well as empirical measures to do cross-country comparisons is meager.

Although the intrinsic difficulty in measuring an activity that is secluded from public eyes, the patron-brokerage networks can be tracked. Trotta (2003) and Stokes (2007) suggest studying not only the dyadic relationship between the patron and client, but also the strategic links between party leaders, party brokers and voters. Empirically it has been found that clientelist parties are greatly decentralized. This approach enriches the understanding of political strategies and measures how much intermediation a party develops to effectively capture voters. Studies on such networks are found in Argentina (Auyero 1997, 2000; Torres 2002), Colombia (Martz 1997, Sudarsky 2001, Rubio 2003; Durán-García 2000), Mexico (Magaloni 2007) and Brazil (Lanna 1995).

Instead of focusing on the muddy notion of clientelism, economists have preferred to study the more clear-cut problem of redistributive politics of targeted and excludable benefits to gather electoral support. This has been done in an ideal democratic setting –accountability, perfect information, symmetry of agents. Models of electoral competition and legislative bargaining explain how office-seeking politicians choose their political platforms when they face incentives to court their constituencies and thus be reelected. Persson and

Tabellini (2000) lay out the standard framework of two identical parties that commit to their electoral promises and voters able to coordinate their intra-group actions. In this framework, the policy platforms/choices depend on the relative strength of groups either based on their large amount of swing voters, ideological leanings or lobbying capacity. The main result points that politicians set policies to please the most influential groups of voters[‡].

Analysis of pure redistribution that abstract from public goods and rent-extraction, like Cox and McCubbins(1986) and Dixit and Londregan(1996,1998) incorporate the notion of "machine politics". In this scenario, groups of voters have ideological affinities and parties are able to target their supporters. Core supporters could be seen as the result of repeated interactions of clientelistic exchanges, however these authors take that machine politics as exogenous leaving it as a black box.

Models that explicitly introduce clientelism as a direct and individual political exchange between candidates and voters in a no commitment context are scarce. Robinson and Verdier (2003) and Keefer and Vlaicu (2008) are the main references. The former provides a formalization of patronage based on a modified version of the probabilitistic voting model. The main contributions of their papers are to formalize the self-enforcement character of the clientelistic exchange and to show how the redistribution that takes place in the form of patronage provides incentives to distort the investment in public goods bringing inefficiencies in redistribution. This happens because the clientelistic incumbent hurts the credibility of his own offer and enhances the entrant's chances of winning by providing public goods. In addition, these authors show that patronage is a relatively attractive political strategy when the productivity is below a threshold level. The model is insightful to analyze patronage although simplifies too much the nature of the political competition, the budget allocation problem and the potential conflict between clients and non-clients.

Keefer and Vlaicu (2008) analyze the effect of politicians' strategies in managing the credibility of their electoral promises on the fiscal policy outcomes. They aim at explaining differences in fiscal policies in democracies by highlighting candidates' cost of building political credibility. They also use the probabilistic voting model in which two symmetric candidates could either pay the costs of mobilizing voters and develop credible relationships with them or hire a patron-client network which guarantees politicians' campaign promises as well as voters' electoral support. Here patron-client relationships are forged independently of political considerations and outside the dynamics of political competition. Patrons are simple intermediaries that can be hired at the highest bidder represented by targeted spending.

In line with the literature on redistributive politics, these authors find that the reliance on patrons bias the policy toward targeted spending and against public good provision. However, the use of patron-client networks introduces additional policy ills because it causes delayed political development. This happens because political competitors ignore

[‡] Persson and Tabellini (2000) comment on authors that consider the case of informed and uninformed voters and they develop a model of redistributive politics with rent-extraction (chapter eight).

the direct organization of voters, who never believe in politicians and prefer to stay in deals with patrons, whose interest are far from promoting general welfare-enhancing policies. As a result, the collective action problem of voters prevents from selecting good politicians, thus placing a brake on the institutionalization of democratic competition.

In summary these two theoretical exercises point out a well-known fact about clientelism as a style of redistributive politics, which is the undersupply of public goods because patrons find targeting spending/rewarding more effective for electoral support. Robinson and Verdier (2003) indicate that clientelism tends to be worse in situations when productivity is low and patronage is attractive to poor agents. Keefer and Vlaicu (2008) highlight that clientelism is associated with low degrees of political coordination among voters. Then, it is a politicians' strategy of political mobilization of a poorly organized electorates. In both articles clientelism and poverty (or high income inequality) and underdevelopment have a direct relationship.

These authors aim at disclosing poverty/development traps. While in Robinson and Verdier (2003) it is a low level of productivity and high inequality which sustains into office a patron interested in keeping agents poor, in Keefer and Vlaicu (2008) it is politicians' lack of credibility and their reliance on patron-client networks which delays the process of democratic maturity. In such process, voters and politicians would overcome the problem of accountability and correct the bias against general welfare-enhancing policies.

These insights suggest two fronts of actions to exit the poverty trap. On one hand, improving the productivity of the economy and reducing the degree of inequality would diminish the patron's leverage and increase the incentives to provide public goods. On the other hand, establishing mechanisms to overcome the credibility problem of politicians and suppressing distorting intermediaries between citizens and politicians would improve the selection of better politicians. One decade of economic and political reforms in Latin American, the promising 1990s, along these policy lines, proved the resilience of clientelism and the limited understanding of reformers.

It is clear that important aspects of clientelism have not been sufficiently studied. The main question is how clientelism threats democracy and thus development. Intuitively, it does so "*by sliding into what could be defined as 'systemic corruption', crippling institutional trust and public confidence in the political system and in projects that otherwise could empower citizens*" (Roniger 2003, p. 20). In this line, Stokes (2007) points out the little research on the institutional causes and consequences of clientelism. Furthermore, she indicates that "*Much theoretical work and empirical research remain to be done. The affinity between inequality and clientelism is settled fact, but the mechanisms linking the two, and the direction of causality are not"* (Stokes, p.32).

2.1.3 Main Facts on Clientelism in Latin America

Three facts greatly connected to clientelism are reported in this section: 1.Pervasiveness of corruption; 2. Vote buying, and 3. Resilient clientelism.

A. Pervasiveness of Corruption

Corruption is simply defined as "the abuse of public power for private benefit" and takes various forms[§]. Corruption can be thought as a proxy variable of clientelistic politics, however it is important to clarify that not all corrupted acts are connected to clientelism. Corruption can happen simply because of weak rule of law.

Clientelism brings about corruption insofar as it diverts public resources or public rights to sustain clientelistic politicians into power as well as their army of brokers. This political strategy entails an agency problem for patrons. Once appointed in a public sector position or secured in an intermediate link of the patron-network, clients could divert resources for themselves. However, such diversion may not be perceived as related to political strategies of candidates to stay in office. Herein lies the difficulty in distinguishing motivations of corrupt acts.

The 2007 report of the Latinobarómetro, an opinion survey carried out in Latin America to measure citizens' attitudes and performance of democracy, indicates that the perception of corruption has been and still continues being high in the region. A 43% of Latin Americans believe that there will be more corruption in the next generation. Table 1 shows the incidence of corrupt acts.

Table 1. Corrupted Acts

% of positive answers to the question: Have you, or a relative of yours, heard about a corrupted act in the last twelve months?

	Actos de Corrupción 2001 -2007						
	2001	2002	2003	2004	2005	2006	2007
ARGENTINA	24	25	19	18	14	14	23
BOLIVIA	32	20	20	17	19	12	16
BRASIL	69	61	56	54	74	68	66
COLOMBIA	11	19	11	10	14	12	13
COSTA RICA	18	24	17	28	21	16	23
CHILE	13	13	6	10	8	9	9
ECUADOR	27	21	15	13	16	8	12
EL SALVADOR	19	16	20	14	9	12	12
GUATEMALA	16	31	10	23	12	19	10
HONDURAS	24	23	16	16	8	10	9
MÉXICO	65	59	53	53	50	26	33
NICARAGUA	17	41	18	21	16	13	10
PANAMÁ	21	23	18	15	8	6	6
PARAGUAY	24	22	20	15	19	14	21
PERÚ	22	25	12	16	14	12	23
URUGUAY	18	13	12	9	10	12	17
VENEZUELA	27	27	24	15	16	13	22
REPÚBLICA DOMINICANA				28	17	17	12

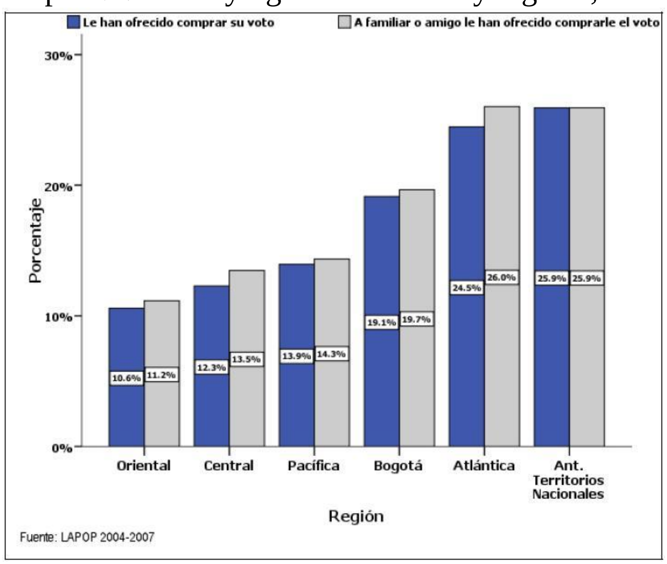
Source: 2007 Latinobarómetro Report

[§] "Corruption is sometimes involved in: satisfying regulations and obtaining licenses to engage in particular activities (e.g. opening a shop; operating a taxi); land zoning and similar official decisions; access to publicly provided goods and services; decisions regarding procurement or public investment contracts; control over the provision of tax incentives; and hiring and promotion within the public sector" Schneider and Enste (p. 90, 2000).

B. Vote Buying

Another manifestation of clientelism is vote buying. Surveys as Latinobarómetro and Americas Barometer include questions on this practice, which is still important in Argentina, Brazil, Colombia, Dominican Republic and Ecuador. Systematic analysis of these data needs to be done yet. A rough idea on this phenomenon can be drawn from the Colombian case shown in graph 1. Thus, according to the 2007 Americas Barometer report on Colombia, 16.4% of the surveyed people said they received a monetary reward in exchange for their vote. The percentage increases to 17.4% when a friend of the surveyed was made such offer. The regions with the highest percentage of vote buying include Bogotá, the capital district, where the electorate concentrates and two regions which have been historically perceived as very clientelistic. Unsurprisingly, these regions are among the poorest areas in the country.

Graph 1. Vote Buying in Colombia by regions, 2007



Source: Rodríguez and Seligson, 2007.

C. Resilient Clientelism

The 1990s saw a wave of political reformism in the region. Nonetheless, clientelism was resilient to these transformations. The reforms were meant to democratize the system in those countries with autocratic regimes or hindered political competition as well as introduce more adequate rules to improve accountability, fight corruption and encourage citizens' political participation. Some of the constitutional reforms took place in Brazil 1988, Argentina 1994, Colombia 1991, Peru 1993 and Ecuador 1998.

Studies on Clientelism as Gay (1998) and Trotta (2003) among others, find a change in the nature of clientelism in the last two decades. They point that clientelism moves from a traditional/thick patron-client relationships to a more dynamic broker/thin relationships. Overall, the traditional form was characterized by less intermediation and more asymmetry, stability and durability of the patron-client ties which were individually settled. In contrast, the broker form moves toward the opposite characteristics of the traditional form, thus establishing a more pragmatic relationship between clients and brokers. Here clients could act through "clientelist associations" instead of acting on individual stands. However, the broker patronage relies more heavily on the distribution of state resources and rights than traditional patronage. In Colombia, some evidence shows that more horizontal but short-lived relationships between patrons and clients intensify the competition between patrons. As a result, the post-reform scenario was characterized by high party fragmentation and instable coalitional politics (Gutierrez 2004).

The difficulties in understanding the resilience of clientelism comes from *"a major tension of modern democratic polities, which are built on citizenship and political equality but leave the economic domain open to inequalities and substantial socioeconomic gaps"* (Roniger 2003, p.20). The next section focuses on one source of such gap.

2.2 The Notion of Informality

Informality refers to the non compliance of workers or firms with labor and business regulations. It refers to the economic activity that takes place outside the fiscal and regulatory control of the state and as such it is an indicator of state enforcement. It is refers to the shadow or underground economy whose output is legal but its activity has a degree of illegality[**].

Despite the difficulties in measuring Informality, in 1993 the first international definition of Informality for statistical purposes was agreed. Yet, there are different measures. The first focuses on the absent of social security coverage of informal independent workers and informal salaried workers. The second looks at the characteristics of productive units and their legal status. Table 2 summarizes these notions and shows the regional average.

[**] It is important to note that the informal sector is a subset of the entire illegal activities. The underground economy is relatively identifiable by its non-participation in labor or business regulation and can be surveyed. Other illegal economic activities comprise more serious non-compliance –e.g. drug smuggling. Naturally, informal business and more harmful illegal activities could be complementary in certain instances.

Table 2. Definitions of Informality and Latin American Average (2005-2006)

Definition	Criteria	Details	Regional Average
Legalistic	No registration of salaried relationship with social security	a. Independent workers (self-employed professionals, artisans, handymen, construction laborers, taxi drivers and street vendors) b. salaried workers (domestic employees, unpaid family workers, microfirm workers, and those working in larger firms under informal contracts)	a. 24% b. 30% (% of total urban employment)
Productive units	Unregistered small business units	i) Informal own-account enterprises that occasionally employ family workers or employees ii) enterprises of informal employers which are small in size and/or registered themselves or their workers	54.5% (% of workers)

Sources: Perry et al. (2007), OECD (2008).

This segmentation of labor and productive markets has been seen as the result of two main reasons. Firstly, because of voluntary "exit" of workers and firms, who find the state regulatory framework burdensome and of little value. Secondly, due to the involuntary "exclusion" of low-income, unskilled workers or rural workers who don't have access to fundamental state benefits.

2.2.1 Literature Review on Informality

Informality can be seen as a more updated version of the dual economy concept developed by Lewis in the 1960s. Dualism refers to the coexistence of traditional and modern sectors. The former can mean either the agricultural sector, rural production or more broadly, the use of older-techniques of production that are labor intensive and forms of organization based on family as opposed to wage labor in which output is distributed in the form of shares that accrue to each family member. The latter can mean either industrial sector, urban production, or in general the use of modern and capital intensive technology, wage labor and profit-seeking activities. (Ray 1998, p. 354). Formal and informal sectors draw upon the idea of segmentation in the economy with important differences in technology and relationships between the production factors and with the state. The emergence of an urban informal sector was seen as a consequence of delayed economic modernization which could not absorb the labor force that moved from rural to urban areas in search of higher wages.

However, the picture of duality was greatly enriched from the 1960s to the 1990s, now showing a very dynamic and highly heterogeneous informal sector. As was seen in the previous section, Informality comprises poor excluded workers as well as low and middle-income small businessmen and self-employed workers who deliberately stay informal. According to recent empirical evidence, a driving force in Informality is the "exit" reason. These businesses consider the "*optimal level of engagement with the mandates and* *institutions of the state, depending on their valuation of the net benefits associated with Formality and the state's enforcement effort and capability*" (Perry et. al., 2007, p.2). The exit choice causes the exclusion form to some extent because when businesses move toward Informality, their employees end up excluded from the supply of state services.

There have been models aiming to explain business' choices between Formality and Informality in order to understand their incentives and determine more efficient regulatory frameworks. A complete review can be found in Schneider and Enste (2000). Overall, the size of the informal sector has been explained firstly by high or inadequate taxation, and secondly by the business and labor regulatory framework, the level of enforcement against informal firms and country's institutional quality. Specifically, tax evasion and tax avoidance have been received a great attention in this literature in which the institutional setting and the quality of regulation are taken as exogenous and the economic reasoning dominates.

Given the persistence of the phenomenon, the World Bank and other development agencies have thoroughly studied the phenomenon. In their view, a large informal sector delays development because it is characterized by low aggregate productivity coming from small scale of activity, low technology, and rigid constrains on human capital accumulation and credit access. It also reinforces poverty as workers go unprotected from health and employment shocks and lack old-age security. Loayza (1996) finds supporting evidence of this negative view of the informal sector in many Latin American countries in the early 1990s. However, Schneider and Enste (2000) report that, in general, the effects of the informal economy on economic growth remain ambiguous. This is because the informal sector also brings a dynamic entrepreneurial spirit whose voluntarily self-selection between the formal and informal sector introduces a flexible response to the business cycle and constraints on bad government though by opting out instead of voicing. One possible explanation of this ambiguity could lie in varying levels of income inequality and institutional quality across countries.

As for income inequality, other studies (i.e. Chong and Gradstein, 2007) found a positive correlation with Informality, after controlling for level of development and other institutional characteristics. However, the endogeneity between inequality and Informality via institutions makes difficult to identify the effect of inequality on Informality from the effect of institutional variables-i.e. low public spending in education feeds inequality but most of the unskilled workers stay in the informal sector. The World Bank report says "*more analysis is needed to understand better how the institutional setting may affect the channel through which inequality affects Informality*" (Perry et al., 2007, p. 239).

Related to institutional quality, differences in corruption run parallel to differences in the size of the informal sectors across countries. Several authors provide empirical evidence on the direct correlation between corruption and larger shadow economies, thus pointing the complementary between these two phenomena (Johnson, Kaufmann, and Zoido-Lobatón, 1998; Friedman, Johnson, Kaufmann, and Zoidó-Lobaton, 1999).

In emphasizing on institutions, the World Bank states that Informality can be seen as a symptom of a broken social contract, where the lack of legitimacy of political institutions and poorly resolved social tensions lead to agents to opt out the formal system. At the bedrock of the social contract is tax compliance which is the fundamental social exchange between citizens and the state (Perry et al., Ibid., p. 228). To the extent that workers and micro-entrepreneurs who opt out the formal system and evade taxes, the effectiveness of public expenditure and social service provision is severely constrained. Firstly, because of the state is financially limited as this reduces its ability to provide public goods. Secondly, because of the exit choice relaxes citizens' attitudes on the checks and constraints that political agents must comply with. As a result, inefficiencies and corruption in state services are encouraged by a culture of non-participation and non-compliance. It follows that the growth of the informal sector brings about a development trap.

In this literature policymaking plays an important role in overcoming this trap. Formal models' insights focus on better design of social security systems and regulatory environments to modify agents' incentives. In addition, developmental agencies recommend major improvements in the quality and fairness of state institutions and policies to defeat the culture of noncompliance. Naturally, tax reforms have been at the very heart of economic reform packages.

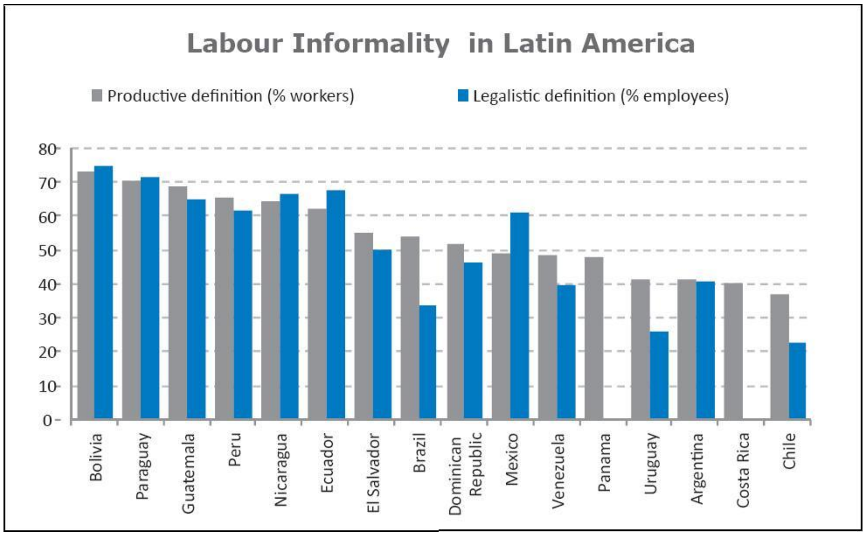
Overall, Informality has been modeled leaving aside the political dimension. Yet, the truth is that agents, when making decisions on staying formal or informal, choose based not only on a cost-benefit analysis but also on their perceptions and expectations about the performance of the political system. Although the literature has acknowledged the importance of this dimension, the central question on the mechanisms linking the decision of being formal or informal to the political context remains unanswered.

2.2.2 Facts on Informality in Latin America

A. Informality Increase in the 1990s

The World Bank in its 2007 report found distressing increases in Informality in many countries of the region over the 1990s. Graph 2 shows the incidence of Informality by countries. Bolivia and Paraguay have more than 70% of the labor force in the informal sector (productive definition) whereas this figure for Chile and Costa Rica is about 40%. In between, there are Mexico and Brazil with 50%.

Graph 2



Source: Latin American Economic Outlook 2009, OECD

The immediate causes of this increase are: 1.) sharp increases in real minimum wages in some countries, 2). changes in labor market and social security legislation, increased availability of noncontributory social protection schemes for informal workers, 3.) poorly designated social security systems that tax heavily workers in the formal sector, 4). inadequate macroeconomic policies that led to artificial booms in nontradable, which intensively feed informal sectors, and finally 5). weakened enforcement capabilities of the states.

B. Low Tax Morale and Tax Collection

The World Bank reports that Informality (after controlling for per capita income) is negatively correlated with tax morale –society's disposition toward tax compliance. Citizens' beliefs and perceptions of government's performance and the quality of public spending influence their tax compliance which is not only a matter of deterrence mechanisms. Surveys show that in Latin America the low confidence of its citizens in the state as to enforce the law is outstanding when compared to the same attitudes of citizens of other emerging regions. Also, there is a strong perception that the state is weak and does not respond to the interest of the majority. Thus, "countries with high Informality tend to be those where the social norm is not conducive to complying with tax regulations" (Perry et al., Ibid, p.232).

Low tax morale entails low tax collection. Tax revenues in the region remain below the international norm because of undertaxation of income, wealth and property. The bulk of taxation remains on indirect over domestic and internationally traded goods and services. The Latin American tax systems show a relatively low tax collection due to their poor capacity of tax administration, narrow tax bases and excessive exemptions. In regard to the latter the World Bank reports that:

"personal exemptions levels increased from an average of 60 percent of GDP per capita in 1985 to 230 percent in 2003 (an unusually high level by international standards), and the income levels taxed at maximum rates (the cutoff for the upper-income bracket) were lowered sharply" (Perry et al., 2007, p. 225).

This means that the rich pay a much larger share of taxes than their counterparts in developed countries. As for social spending it is characterized by patterns of regressivity (i.e. social security in particular the pension system) and important within-country inequities because differences in the quality of access to social services by income groups are significant.

C. High Costs of Formality

The decision of being informal or formal depends on the costs of Formality, which are relatively high for the region. According to OECD' estimations, to start running a medium size firm requires twice as many hours/number of payments in Latin America than in OECD countries. Table 3 illustrates that countries like Brazil, Bolivia, Argentina, Mexico, and Ecuador require an alarmingly huge amount of time to start a business while countries like Colombia, Dominican Republic and Ecuador need a large number of payments to do so.

Table 3. The Costs of Compliance in Latin America and OECD countries

	Starting a business	Paying taxes	
	Cost (% of income per head)	Payments (number)	Time spent (hours)
Argentina	9.7	19	615
Bolivia	134.1	41	1 080
Brazil	10.4	11	2 600
Chile	8.6	10	316
Colombia	19.3	69	268
Costa Rica	21.3	43	402
Dominican Republic	31.1	74	286
Ecuador	29.2	8	600
El Salvador	73.1	66	224
Guatemala	47.3	39	344
Honduras	59.9	47	424
Mexico	13.3	27	552
Nicaragua	119.1	64	240
Panama	22.0	59	482
Paraguay	77.6	35	328
Peru	29.9	9	424
Uruguay	46.0	53	304
Venezuela	28.2	70	864
Latin America	**43.3**	**41.3**	**575**
Czech Republic	10.6	12	930
Greece	23.3	21	264
Hungary	17.7	24	340
Italy	18.7	15	360
Korea	16.9	48	290
Poland	21.2	41	418
Portugal	3.4	8	328
Slovak Republic	4.2	31	344
Spain	15.1	8	298
Turkey	20.7	15	223
OECD	**7.2**	**17.5**	**267**

Source: OECD, 2008, p.154

2.3 Clientelism and Informality: Research Niche

At this point, the previous discussion must suggest that clientelism and Informality have a double-way relationship interacting through the quality of institutions that they jointly structure. On one hand, a symptom of clientelistic politics is found in large and inefficient burocracies, and state corruption which translate into high opportunity cost of tax compliance and business regulation observance for citizens. In this line of reasoning, clientelism encourages Informality. On the other hand, Informality makes economic agents interested in working outside the formal sector (in its “exit” side). This creates incentives to vote for politicians that obtain electoral support based not on policy platforms or performance in office but on low tax or regulatory enforcement. Voters’ behavior is rationally explained by the lack of credibility of such broad interest promises in a context of low institutional quality. In this line of reasoning Informality encourages clientelism.

This research project aims at throwing light on the mechanisms that link these phenomena frequently linked to development traps. In particular, I focus on the interactions between clientelism and Informality in electoral competition. The general objective is to provide an analytical framework to understand the underlying mechanisms of electoral competition in developing countries. This competition is characterized by asymmetries between politicians (credibility and ability to mobilize voters) and asymmetries between voters (income and participation in a certain segment of the economy) amidst an environment of low institutional quality (i.e. low rule of law). The specific objective is to provide empirical evidence on these mechanisms for some Latin American countries.

By focusing on electoral competition, I explore the intuition that clientelism could depress political competition. Thus, elements as the supply of politicians/parties, entry barriers and biases in electoral strategies that entrants face when contesting clientelistic incumbents are examined. Political competition is defined as the degree of contestability in the political exchange among citizens and politicians and among politicians[††]. To the extent that political competition is hindered, popular sovereignty is meaningless. Apathy in politics and politicians due to the lack of better/credible candidates is symptomatic of Latin Americans' disappointment with the unfulfilled promises of democracy as well as the subsequent political instability of some of the most vulnerable countries in the region. Mechanisms that encourage "high-quality" political competition would pave a sounder way to development.

By bringing Informality into the picture, I investigate under which conditions a dual economy sustains clientelistic politicians in office. In this way, the economic incentives and conflict among the demand side of politics, that is, voters are enriched. Informality in its "exit" side has been studied as an economic choice in a context of low state enforcement and low tax morale. Thus, the political dimension of Informality has been exogenous limiting our understanding on the persistence and complexity of the problem. The decision of being informal or formal has a political dimension insufficiently stressed and explored. Agents are not only workers or businessmen but also voters that select politicians whose actions shape institutions and affect their welfare. Emphasizing this side of the political exchange would highlight individually rational but collectively harmful attitudes of Latin American citizens before their development traps. As Hirschman noted, "confronted with a lack of voice in and relevance of the state, Latin Americans take their business elsewhere; and in doing this, they further undermine the region's growth prospect" (Perry et al., 2007, p.19).

The next section provides a model of electoral competition that captures the interactions between clientelism and Informality in a simple set up as a starting point in the formalization of the problem.

[††] The IO literature works with the notion of contestable market which is one where "entry is absolutely free and exit is absolutely costless" Church and Ware (2000, p.507).

3. A Static Model of Political Competition with Clientelism and Informality

The following exercise depicts the electoral competition between a clientelistic incumbent and an entrant that compete in elections by offering policy platforms in terms of a tax rate and public goods. The economy has two groups of voters who operate in a dual economy and choose politicians based not only on the utility they derive from their policy platforms but also on their ideological leanings towards candidates.

The model draws upon the probabilistic voting model presented by Persson and Tabellini (2000) and Robinson and Verdier (2003). In first place, the economic and the political settings are developed. In second place, electoral equilbria are considered in two scenarios: a clientelistic regime with no entrant and a clientelistic regime with entrant. Finally some theoretical insights are provided.

3.1. The Basic Setup

The economic setting

The economy has two sectors, informal and formal. The former is characterized by lower productivity and tax evasion whereas the latter has the opposite characteristics. Here only the "exit" side of Informality is considered, thus leaving out the "exclusion" side. This segmentation introduces an imperfect market economy.

There are two groups of voters, denoted by J=1,2 that are producers-consumers. Each group has a population share α_J, and it is assumed that $\alpha_1 \leq \alpha_2$, with $\sum \alpha_J = 1$. Income is exogenous and identical for each individual intra-group. Income inter-group is such that $y_1 > y_2$ The average income is $E(\alpha_J y_J) = y$ for all J.

Citizen i has quasi-linear preferences over private consumption c^i and a publicly provided good g. His utility is,

$$w^i = c^i + H(g) \tag{1}$$

Where H(g) is a concave and monotonically increasing function common to all citizens. The variable g is a pure public good measured in terms of spending per capita.

A non-distorting common tax rate is levied on all citizens, where $0 \leq \tau \leq 1$. Then,

$$c_J^i = (1 - \tau) y_J^i \tag{2}$$

Citizens can move between sectors although they should pay a cost when doing so. Informal agents that move to the formal sector must pay taxes whereas formal agents that opt out the system evade taxes but suffer a proportionate loss of income equal to $(1 - \beta_J)$, so that their income becomes $\beta_J y_J^i$ in the informal sector, where $0 < \beta_J \leq 1$. This proportion is group-specific and it can be seen either as the loss in productivity or as the potential fines she must pay in case of being detected for tax evasion. As individuals are equal intra-group the subscript I is dropped.

Citizens in group one remain formal if the following participation constraint holds,

$$(1-\tau)y_1 \geq \beta_1 y_1 \tag{3}$$

Hence,

$$(1-\beta_1) \geq \tau \tag{4}$$

Equation (4) is called the Formality constraint which sets a maximum to the tax rate so as to prevent formal agents with the highest income to become informal. It is assumed that $\beta_1 < 0$ because for this group the productivity gap between sectors is important and it is more difficult to evade taxes without being detected.

Citizens in group two have two contrasting characteristics. First, they face no serious income loss when moving toward the informal sector, that is $\beta_2 = 1$. This assumption reflects group two's relatively low productivity gap and its low probability of detection for tax evasion.

Second, once they are in the informal sector, they can enter into a clientelistic relationship with the incumbent politician. Here, informal voters and politicians exchange "tax noncompliance" wherein the voter bribes the incumbent to obtain either low level of prosecution from tax authorities or significant tax exemptions.

A citizen in group two opts out the formal system if,

$$(1-\tau\varepsilon)y_2 - \psi(b) \geq (1-\tau)y_2 \tag{5}$$

Where ε is the efficiency of the incumbent in securing client's non-compliance and $0 \leq \varepsilon < 1$. If ε=0 the incumbent is totally effective in providing safe noncompliance (zero tax payment or maximum tax exemption). If ε≈1 the incumbent has poor capacity to protect/create non-compliers. In this simplified setup, ε is exogenous although set by the incumbent. This parameter reflects the ability to manipulate tax rules as a low ε signals that politicians "trade" tax-related institutions to obtain private benefits. A high ε can reflect sound rule of law and high tax morale that set effective constrains on politicians willing to trade on these public goods. A more interesting analysis would endogenize this parameter. From this point on, ε is referred as the tax exemption factor.

The function ψ(b) denotes client's cost for safe non-compliance. This function depends on the bribes the citizen pays to the incumbent, where $0 \leq b$. This function is bounded, $0 \leq \psi(b) < \tau y_{2,}$ convex and continuous.

For the sake of simplification it is assumed that voters in group one, the richer citizens, cannot be clients. This can be thought as the result of large opportunity costs of tax evasion since bribes would be too high given the high probability of detection for this group[‡‡].

Richer individuals want a smaller government because proportional taxes imply that they pay a larger share of the tax burden. The clientelistic exchange exacerbates this policy conflict between the two groups of citizens since tax evasion means a larger transfer of income via public goods provision from voters in group one to voters in group two.

The Political Setting

There are two politicians, an incumbent and an entrant, denoted by P=I, E. Incumbent is a clientelistic politician whose credibility hinges on his network of brokers and can set a tax exemption factor less than one, $\varepsilon<1$. Although only voters in group two can become clients, Incumbent's political platform is credible to all voters. Entrant has no clients and needs to build her credibility ($\varepsilon=1$). All this is common knowledge and information is complete.

The Clientelistic Exchange (CE)

This exchange exists as long as it is self-enforcing for both sides: the voter in group two and Incumbent. The voter finds the deal with Incumbent beneficial if her participation constrain, that is equation (5), is slack. However, Incumbent faces a moral hazard problem because the client can renege on his part of the contract by not paying the bribe but benefiting from the tax exemption. Assume that there is a probability q that Incumbent's network catches the cheating client, in which case, the client is denounced before tax authorities and has to pay the full tax rate plus fines, denoted by f. The probability that Incumbent's network does not reach the client who becomes a free-rider is (1-q). Hence, the client pays off Incumbent if,

$$(1-\tau\varepsilon)y_2-\psi(b)\geq(1-q)(1-\tau\varepsilon)y_2+q\big((1-\tau)y_2-f\big)$$

The left hand side of this shows client's net income while the right hand side shows the expected income if he stays in the informal sector but do not bribe the politician. Given that individuals in group two has no serious income loss from being informal, then fines are assumed to be zero (f=0). To simplify this setup, also assume that q=1, which indicates that Incumbent's network solved the free-riders problem and the previous equation takes the form of equation (5).

Incumbent can make credible promises of safe tax noncompliance as long as the following participation constraint holds on his side,

[‡‡] Clearly, a more complete scenario would allow richer citizens be clients, in that case, their bribes would equate to lobby for tax exemptions. This is a possibility not far from reality.

$$R(b) - C \geq 0 \qquad (6)$$

The clientelistic exchange occurs whenever the rents, R(b), that Incumbent extracts from his clients through bribes exceed the costs of providing tax exemptions. These costs are positive and paid by Incumbent's wealth. R(b) is assumed continuous and concave with b exogenous.

Equation (5) amounts to a constraint for the tax rate given by,

$$\frac{\psi(b)}{(1-\varepsilon)y_2} \leq \tau \qquad (7)$$

The clientelistic exchange is feasible if and only if the range to set taxes, set by equations (4) and (7), holds,

$$\frac{\psi(b)}{(1-\varepsilon)y_2} \leq \tau \leq 1 - \beta_1 \qquad (8)$$

This expression is called the clientelistic feasibility constraint. Note that when $1 - \beta_1 \leq \frac{\psi(b)}{(1-\varepsilon)y_2}$, Incumbent is not able to set a tax rate such that voters in group one stay formal and at the same time voters in group two stay informal. In this case $\tau = 1 - \beta_1$ and clientelism is not feasible. Unfeasibility could be explained either by large values of bribes paid by clients or a tax exemption factor close to one in an economy with very low costs of moving from the formal to the informal sector.

Timing of the game is as follows. (1) Incumbent sets ε; (2) Incumbent and Entrant announce their policy platforms $\boldsymbol{q}_P = (\tau_P, g_P)$; (3) Popularity shock occurs; (4) Election are held; (5) The winner implements his/her policy and production, taxation and consumption takes place.

3.2. Electoral Equilibria

Case 1: Clientelistic Regime without Entrant: Political Monopoly

In this scenario, voters in group two and Incumbent find the clientelistic exchange beneficial (equation (6) is slack and equation (8) holds). Incumbent runs uncontested because Entrant has no means to build her credibility.

Incumbent sets taxes by solving the following problem,

$$\max_{\tau} R(b) - C$$

$$\text{s.t.} \qquad \frac{\psi(b)}{(1-\varepsilon)y_2} \leq \tau \leq 1 - \beta_1$$

Under political monopoly tax revenues are reduced by the proportion ε thereby shortening the provision of public goods. The optimal tax rate under political monopoly is denoted by τ^m.

Case 2: Clientelistic Regime with Entrant

Although Incumbent's network of brokers is incentive-compatible for both parts, Entrant is able to build credibility so as to capture votes. For simplicity assumed that credibility is exogenously determined. A more complete analysis should include the costs of achieving binding electoral promises.

Any feasible policy must satisfy the government balanced constraint. However, Incumbent and Entrant do not face the same constraint for Incumbent raises lower taxes than Entrant. The budget constraints are,

$$g_P = \begin{cases} \tau_P\big(y + \alpha_2 y_2(\varepsilon - 1)\big), & P = I \\ \tau_P y, & P = E \end{cases} \tag{9}$$

Where $(\alpha_J y_J) = y$, for all J. The term $\alpha_2 y_2(\varepsilon - 1)$ is negative indicating the dissipation effect brought by the clientelistic exchange.

Voters' indirect utility on policy preferences are denoted by $W_J(\boldsymbol{q}_P)$ for J=1,2 and p=I,E. Neither Entrant nor Incumbent can imitate each other because voters have complete information about their types. Consequently, the optimal policy platforms of each candidate can diverge.

Substituting Entrant's budget constraint into $W_J(\boldsymbol{q}_P)$ gives,

$$W_J(\boldsymbol{q}_E) = \big(1 - \tau_{EJ}\big)y_J + H(\tau_{EJ} y) \text{ for J=1,2} \tag{10}$$

The bliss point of voters from Entrant's platform is given by

$$\tau_{EJ}^* = H_\tau^{-1}\left(\frac{y_J}{y}\right)$$

By concavity of H(.), this expression implies that the tax rate preferred by each group is decreasing in y_J. Voters in group one want lower taxes than voters in group 2, then $\tau_{E1}^* < \tau_{E2}^*$.

Now, let's consider Incumbent's situation. Substituting Incumbent's budget constraint into the indirect utility of group one gives,

$$W_1(\boldsymbol{q}_I) = (1 - \tau_{I1})y_1 + H\left(\tau_{I1}\big(y + \alpha_2 y_2(\varepsilon - 1)\big)\right) \tag{11}$$

The bliss point of voters in group one from Incumbent' platform is,

$$\tau_{I1}^{*} = H_{\tau}^{-1}\left(\frac{y_1}{y+\alpha_2 y_2(\varepsilon-1)}\right)$$

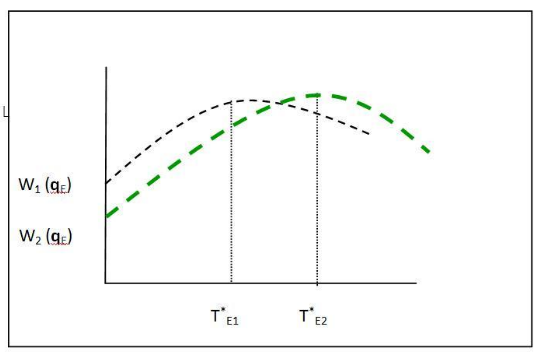
For group two these functions are,

$$W_2(\boldsymbol{q}_I) = (1-\varepsilon\tau_{I2})y_2 + H\left(\tau_{In}\big(y+\alpha_2 y_2(\varepsilon-1)\big)\right) - \psi(b) \tag{12}$$

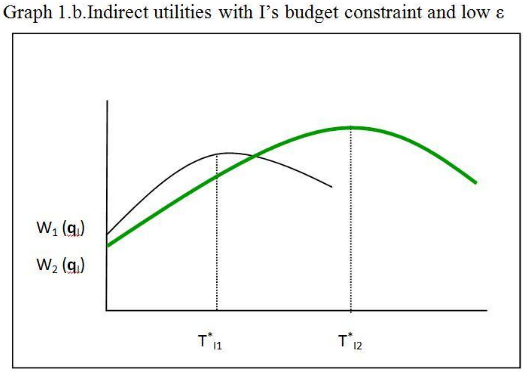
$$\tau_{I2}^{*} = H_{\tau}^{-1}\left(\frac{\varepsilon y_2}{y+\alpha_2 y_2(\varepsilon-1)}\right)$$

The following graphs illustrate how these four indirect utility functions relate to each other as well as their bliss points for τ. Dotted lines indicate utilities obtained with Entrant's budget constraint, and solid lines indicate those under Incumbent's budget constraint. Thin lines refer to voters' utility in group one, and thick lines refer to voters' utility in group two.

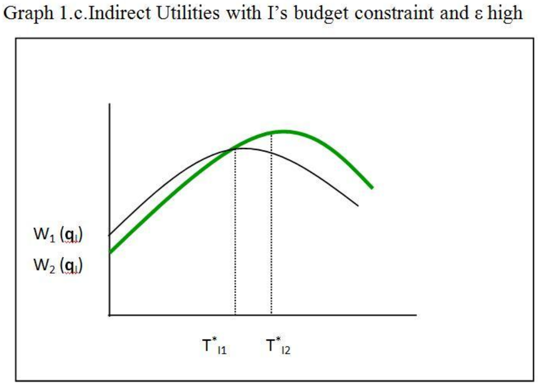
Graph 1.a. Indirect utilities with E's budget constraint



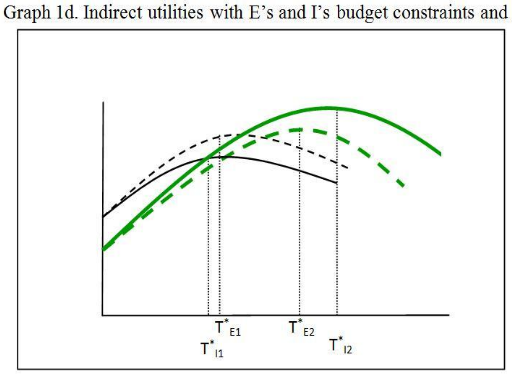
Graph 1.b.Indirect utilities with I's budget constraint and low ε



Graph 1.c.Indirect Utilities with I's budget constraint and ε high



Graph 1d. Indirect utilities with E's and I's budget constraints and ε low



The graph 1.a shows the two utility functions that Entrant faces. There it is true that $\tau_{E1}^{*} < \tau_{E2}^{*}$. Graph 1.b and 1.c shows these utilities for the incumbent in two cases: for low and high ε respectively. When Incumbent is very effective (low ε) clients prefer a higher tax rate relative to non-clients, that is $\tau_{I1}^{*} < \tau_{I2}^{*}$. When ε is high the relative tax preference of clients moves to the left. These results are intuitive because by raising their preferred tax rate when ε is low, clientelistic voters would receive a larger "indirect transfer" from voters in group one. Likewise, lower effectiveness to evade taxes reduces such transfer and increases client's tax burden.

Graph 1.d. shows the set of all four indirect utilities stemming from Entrant and Incumbent platforms when ε is low. It can be seen that Entrant's platform gives a higher utility to voters in group one than Incumbent's because the burden of taxation is lower in the absence of tax reductions to group two. Logically, Incumbent's platform is relatively more attractive to voters in group two providing that clients' costs, ψ(b), do not offset the utility gains from a low value of ε.

However, the nature of the political competition in elections hinges not only on these utilitarian considerations but also on the relative weight of each group of voters. The weight is determined by population shares and ideological densities. Following the probabilistic voting model framework, a voter in group J supports Incumbent if,

$$W_{iJ}(\boldsymbol{q}_I) > W_{iJ}(\boldsymbol{q}_E) + \delta + \sigma_{iJ}$$

σ_{iJ} is an individual-specific parameter that measures voter i's ideological leaning toward Entrant. This parameter can take on negative as well as positive values; when $\sigma_{iJ} < 0$, voters have a positive ideological bias for Incumbent. This parameter has group-specific uniform distribution with density ϕ_J and $E(\delta) = 0$, on the interval,

$\left[-\frac{1}{2\phi_J}, \frac{1}{2\phi_J}\right]$, where $\phi_J > 0$

Each group has members inherently biased toward both candidates. A high value of ϕ_J means a high ideological density. The parameter δ represents the aggregate Entrant's popularity, where higher values indicate more acceptance from the electorate; it can take positive or negative values and it is uniformly distributed over,

$\left[-\frac{1}{2h}, \frac{1}{2h}\right]$, where h> 0

The realized value of δ is not known by the candidates until the election takes place, which introduces uncertainty in the results.

Given the distributional assumptions on σ_{iJ}, each politicians calculate their vote share in each group, denoted by π_{PJ},

$$\pi_{IJ} = \phi_J\left[W_J(\boldsymbol{q}_I) - W_J(\boldsymbol{q}_E) - \delta\right] + \frac{1}{2} \qquad (13)$$

The expression into brackets corresponds to the swing voter in group J. Clearly, entrant's vote share in group J is given by $(1 - \pi_{IJ})$. These shares are random variables that depend on the relative popularity of candidates. The total vote shares of each politician is $\pi_P = \sum_J \pi_{PJ}$.

Using the distributional assumptions on δ, Incumbent´s probability of winning is,

$$P_I = \text{prob}_\delta\left[\pi_I \geq \frac{1}{2}\right] = \frac{1}{2} + \frac{h}{\phi}\left[\sum_J \alpha_J \phi_J \left[W_J(\boldsymbol{q}_I) - W_J(\boldsymbol{q}_E)\right]\right] \quad (14)$$

Where $\phi \equiv \sum_J \alpha_J \phi_J$ is the average density across groups.

The probability of winning is a smooth function of the distance between the two platforms and can be seen as a weighted social welfare function. Candidates choose their policy platforms by maximizing the probability of winning subject to the specific constraints they face. However candidates have different technologies to obtain electoral support. This asymmetry between candidates brings two maximization problems into the scenario.

Using the indirect’s utility functions of voters in each group, Incumbent’s problem is to maximize his expected net rents. The problem is stated as,

$$\max_\tau P_I\,(R(b) - C) =$$
$$\frac{1}{2} + \frac{h}{\phi}\left[\alpha_1\phi_1[(1-\tau)y_1 + H(\tau[y + \alpha_2 y_2(\varepsilon - 1)]) - W_1(\boldsymbol{q}_E)] + \alpha_2\phi_2[(1-\tau\varepsilon)y_2 + H(\tau[y + \alpha_2 y_2(\varepsilon - 1)]) - \psi(b) - W_2(\boldsymbol{q}_E)]\right](R(b) - C)$$

Subject to, $\frac{\psi(b)}{(1-\varepsilon)y_2} \leq \tau \leq 1 - \beta_1$

Then,

$$\frac{\partial(P_I[R(b) - C])}{\partial\tau} = \frac{\partial P_I}{\partial\tau}.(R(b) - C) + P_I.\frac{\partial R}{\partial\tau} \quad (15)$$

The last expression is positive iff $\frac{\partial P_I}{\partial\tau} > 0$, which happens for sufficiently low values of ε and ψ(b). The derivative of Incumbent’s rents with respect to the tax rate is always positive, $\frac{\partial R}{\partial\tau} > 0$. This points out that a higher tax rate increases Incumbent’s possibilities to provide tax exemptions to his clients, who in turn pay bribes that increase his rents.

Entrant’s problem is to maximize her probability of winning,

$$\max_\tau P_E = \frac{1}{2} + \frac{h}{\phi}\left[\sum_J \alpha_J \phi_J\left[\left((1-\tau)y_J + H(\tau y\right) - W_J(\boldsymbol{q}_I)\right]\right]$$

Subject to, $\tau \leq 1 - \beta_1$

Candidates maximize their specific weighted social welfare function and choose the tax rate. As in a Nash equilibrium, each candidate assumes the opponent’s strategy constant.

In Entrant's problem the first order condition shows the optimal trade-off between taxes and public goods, which is simply,

$$\sum_j \alpha_J \phi_J y_J = \phi \mathrm{H}_\tau(y) \tag{16}$$

The left hand side of this expression indicates the costs of taxation whereas the right hand side shows the benefits expressed in terms of consumption of the public good. Hence,

$$\tau_E^* = H_\tau^{-1}\left(\frac{\sum_j \alpha_J \phi_J y_J y_1 + y_2}{\phi y}\right) \tag{17}$$

Incumbent's problem stated in equation (15) becomes,

$$\frac{\partial(P_I[R(b)-C])}{\partial\tau} = \frac{\partial P_I}{\partial\tau}.(R(b)-C) + \frac{R_\tau}{2} = 0$$

Which is equal to,

$$\left[-\alpha_1\phi_1 y_1 - \alpha_2\phi_2(\varepsilon y_2 + \psi_\tau) + \phi \mathrm{H}_\tau\big(y + \alpha_2 y_2(\varepsilon - 1)\big)\right](R(b)-C) + \frac{R_\tau}{2} = 0$$

Thus,

$$\alpha_1\phi_1 y_1 + \alpha_2\phi_2(\varepsilon y_2 + \psi_\tau) = \phi \mathrm{H}_\tau\big(y + \alpha_2 y_2(\varepsilon-1)\big) + \frac{R_\tau}{2(R(b)-C)} \tag{18}$$

Where H_τ and ψ_τ are the derivatives of H and ψ with respect to the tax rate, and ϕ is the average density across groups. Note that $\psi_\tau > 0$, implying that higher taxes go with large bribes. The left-hand side of equation (18) shows that the cost of taxation for group two is reduced by the tax exemption factor but increased by the cost of bribes. The right-hand side indicates that the benefits of taxation are split among the utility from public goods and Incumbent's rents.

Incumbent's optimal tax rate is given by,

$$\tau_I^* = H_\tau^{-1}\left(\frac{\alpha_1\phi_1 y_1 + \alpha_2\phi_2(\varepsilon y_2 + \psi_\tau)}{\phi\big(y + \alpha_2 y_2(\varepsilon-1)\big)} - \frac{R_\tau}{2\phi\big(y+\alpha_2 y_2(\varepsilon-1)\big)(R(b)-C)}\right) \tag{19}$$

An important point here is to note that when $\varepsilon \cong 1$ which implies that $\cong 0$, both candidates converge to the same platform, so that $\tau_I^* \cong \tau_E^*$. In this scenario Incumbent and Entrant cannot differentiate each other so as to build political clout in any group of voters.

The interesting case happens when ε and ψ(b) are low enough. In this scenario, Incumbent count on his clients although he has a clear disadvantage with voters in group one, who receive a larger utility from Entrant's platform. The same is true for Entrant whose disadvantage lies in group two. As can be seen in equations (17) and (19), the best responses hinge on the relative ideological densities that signal to each candidate how to aggregate voters' preferences given their relative advantages. The following sub-cases are considered.

Case 2.1.Advantaged Incumbent: $\alpha_1\phi_1 < \alpha_2\phi_2$: that group two is denser ideologically guarantees more swing voters to Incumbent. Group two does not have strong ideological considerations toward neither of the candidates but their condition of clients confers advantage to Incumbent. Therefore, Incumbent enjoys $P_I > \frac{1}{2}$ whereas Entrant faces a negative bias in the probability of winning.

In terms of Graph 1.d., Incumbent's optimal tax rate, τ_I^* will be closer to τ_{I2}^* , and $\tau_E^* < \tau_I^*$. Determining the provision of public goods requires comparing tax revenues collected by Entrant and Incumbent, that is $\tau_E^* y$ vs. $\tau_I^*\big(y + \alpha_2 y_2(\varepsilon - 1)\big)$. It is clear that for low enough ε Incumbent provides less public goods than Entrant only if,

$$\tau_I^* \alpha_2 y_2 > y(\tau_I^* - \tau_E^*) \tag{20}$$

This indicates that the foregone taxation in group two exceeds the difference in tax rates imposed on average income. However, the opposite case is also possible.

In comparison with political monopoly, it is intuitive that $\tau_I^* < \tau^m$ due to the negative effect on the tax rate contributed by voters in group one over the probability of winning.

Case 2.2. Advantaged Entrant: $\alpha_1\phi_1 > \alpha_2\phi_2$: Here the entrant enjoys $P_E > \frac{1}{2}$ based on her political clout in group one. Entrant's optimal tax rate, τ_E^*, is closer to τ_{E1}^*. As in the previous case, this tax rate is lower than the rate set by Incumbent $\tau_E^* < \tau_I^*$. The Entrant would provide less public goods if the inequality in condition 20 is reversed. This possibility shows that a higher provision of public goods is not necessarily guaranteed when Incumbent is kicked out of office.

Case 2.3. Tied competition: $\alpha_1\phi_1 = \alpha_2\phi_2$: Here the utilitarian distances between platforms receive the same weights whereby making $P_P = \frac{1}{2}$ for P=I,E. Hence, there is an equal number of swing voters in each group. Let $\alpha_1\phi_1 = \alpha_2\phi_2 = \gamma$, so that the average density across groups now is $\phi = 2\gamma$. Equations (17) and (19) becomes,

$$\tau_E^* = H_\tau^{-1}\left(\frac{y_1 + y_2}{2y}\right)$$

$$\tau_I^* = H_\tau^{-1}\left(\frac{y_1 + \varepsilon y_2 + \psi_\tau}{2\big(y + \alpha_2 y_2(\varepsilon - 1)\big)} - \frac{R_\tau}{4\gamma\big(y + \alpha_2 y_2(\varepsilon - 1)\big)(R(b) - C)}\right)$$

When $\varepsilon \cong 0$ thus implying that $b > 0$, Incumbent's aggregated bliss point could be larger or smaller than Entrant's. The sign is determined by the level of Incumbent's rents and client's costs, both depending on the value of bribes. If ψ_τ and R_τ are low enough, and

Incumbent's rents net of costs are large, then Incumbent sets a relatively higher tax rate, $\tau_E^* \leq \tau_I^*$. As before, if condition 20 holds, Incumbent provides less public goods than Entrant.

4. Discussion of the Model Insights

The classical view of clientelism as political monopoly is considered in case one in which the clientelistic incumbent runs uncontested. Here, the entry barrier is brought by the entrant's lack of credibility. Suggestive evidence can be seen in countries like Mexico before 1997 and Colombia during 1957-1978 that had one-party rule and pervasive clientelism. In these countries high Informality and low tax collection was observed.

Still clientelistic politicians in democracies are more frequently contested. Cases 2.1, 2.2 and 2.3 capture this empirical fact. When the clientelistic incumbent has electoral advantage due to high concentration of swing voters within his clienteles, the entrant politician faces an additional barrier to compete, even if she has managed to build some credibility. This situation signals an intense demand of voters for the incumbent's deals whereby voters reflect choices based on utilitarian considerations rather than ideological leanings. Hence, a large informal sector persists. Countries with multi-party competition where the dominant party is perceived as patronage-based machine are Argentina after 1982, Brazil after 1988, Colombia after 1978 and 1991 and Dominican Republic after 1961.

In case 2.2. the nonclientelistic entrant has advantage based on the support of richer voters. The most important fact to highlight is that by knocking the clientelistic incumbent a higher provision of public goods is not necessarily guaranteed. This is because the clientelistic exchange is about tax evasion which creates a conflict between voters. When the conflict is solved in favor of rich taxpayers, a low equilibrium tax rate could arise relative to taxation under political monopoly. However the benefits would be better institutional quality and therefore lower Informality. A country that resembles this scenario is Chile after 1990, where the center-right wing party won presidential elections after two decades of a right-wing dictatorship. In this country the perceptions of corruption are below the regional average and fiscal institutions have been strengthened (adoption of modern audit technology). There Informality is relatively low although inequality is still high[§§]. This case suggests that Informality and inequality not necessarily go together and that the quality of institutions brings sound rule of law but not always progressive public spending.

In case 2.3 the clientelistic incumbent loses territory in the electoral arena and a non-clientelist entrant is able to build credibility so that both have the same change of winning office. However the results in terms of each candidate's public goods provision are ambiguous. The clientelistic incumbent would provide more public goods if his machine

[§§] Certainly the capacity to enforce tax collection as a challenge in the political realm, "a matter of political will because the technology is available and administrative capacity increases are definitely within the range of options of the much-modernized Latin American tax systems" (Perry et al., 2007, p. 232).

politics is profitable enough and the society is highly unequal. To the extent that the entrant politician has her political clout in richer voters that want lower tax rates, the clientelistic politician is more progressive in redistributing income.

This positive perception of clientelism has been pointed out by some scholars, i.e. Keefer and Vlaicu (2008). Only when the machine politics is too costly, the society will be better off with a non-clientelistic entrant. The costs include both the public goods not delivered as well as the erosion of institutional quality caused by low law rule of low, tax morale and negative perceptions on government's performance. Both components entrench inequality and firmly lock the development trap.

In reality, distinguishing when a non-clientelistic entrant runs for office is difficult because she could be initially perceived as independent from extant machine politics but in fact she could imitate incumbent's strategy and raise her own clienteles. Recent presidential elections in Latin America have seen campaigns heavily focused on anti-corruption and anti-machine politics (Argentina 1999, Brazil 2002, Colombia after 1991, Ecuador 2006, Mexico 1997). Nevertheless, political practices of these entrants seem not to differ much from the old practices despite the non-opportunistic motivations that some entrants might have.

Political survival based on clientelism is particularly important when the quality of institutions has been significantly eroded by Incumbents who "traded" enforcement of formal institutions for long time. Thus, the marginal effectiveness of the extant machine politics seems determinant in explaining politicians' strategies. In this analysis the traded institutions are tax compliance but this trade could be extensive to other institutions that encourage Informality. A more complete research should consider how the entrant builds a credible anti-clientelism reputation, the role of non-opportunistic motivations as well as the appeal in mimicking the clientelistic incumbent thus worsening voters' adverse selection problem.

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