

Club Goods Provision: The Effect of Weak Parties on Clientelism Strategies

Katherine McKiernan

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Abstract

How do politicians strategically allocate funds for political gain in the context of weak political parties? In much of the literature on distributive politics, political parties play an instrumental role in determining the allocation of funds. Particularly in clientelist systems, political parties are seen as instrumental for finding reliable brokers who can help translate targeted goods into votes. However, in many democracies, political parties lack both the discipline to insure a cohesive group of elected party members and the internal capacity to build and maintain clientelist networks. I argue that when parties are unable to oversee clientelist machines, national politicians will use relationships with local politicians to determine where to allocate discretionary funds in the form of club goods. I argue that regardless of the political party in office, national politicians are more likely to target municipalities where mayors have personal clientelist networks in place. I explore these relationships in the context of Colombia. Using a Bayesian Mixed-Membership model, I estimate municipal-level clientelism. I find that municipalities with higher levels of clientelism are likely to receive more club goods projects and more discretionary transfers.

In order to reach voters, politicians often depend on political parties to help them coordinate their electoral strategies. Political parties can help provide resources, streamline programmatic messaging, and manage the clientelist machine. However, in much of the developing world, politicians cannot trust political parties to help them reach voters. First, many political parties lack the capacity to coordinate strategies and maintain party discipline. Limited resources make it difficult for parties to help politicians reach the voters they need to target. Second, in many of these countries, a large proportion of citizens are non-partisan. Politicians who target citizens using clientelism, therefore, need to find strategies to reach citizens that do not depend on a political party machine.

Although the challenges that parties face are far-reaching, most of our understanding of how politicians target voters assumes, at minimum, that these politicians have the support and guidance of a political party. Most theories of clientelism assume parties are institutions with the capacity to make decisions about whether to target swing or loyal voters and to maintain party discipline through a clear hierarchy. When these party machines use clientelism as a strategy to target voters, the machine is responsible for recruiting loyal brokers capable of delivering votes. Particularly in non-programmatic contexts, our dependence on party-driven theories limits our understanding of exactly *how*, *when*, and *where* politicians choose to use targeted goods. How, exactly, do politicians who cannot rely on a party machine make decisions about when and where to use clientelist appeals to reach voters? What type of clientelist appeal is most feasible in this context? Who do independent politicians work with?

I propose a theory to explain how politicians in weak party contexts use club goods as clientelist benefits in order to target voters. I argue that when politicians cannot rely on political parties to help them select brokers, they will use alternative brokers to help them distribute club goods. Club goods refer to benefits in the form of public goods that are only accessible to a particular subset of the population. For example, a new water treatment facility that cleans water for a limited geographic area or a new road that connects remote

farmers to marketplaces can both be classified as club goods. In this context, club goods are particularly useful because they are flexible to local needs and can increase the number of voters reached with a targeted good. However, in order for club goods to behave like clientelist benefits, national politicians need to work with local-level brokers who can help oversee who receives the club good and where the club good is best able to incentivize voters to support the national politician. Due to their knowledge of local conditions, local-level politicians can act as effective brokers when national politicians provide club goods. I analyze the case where the local brokers are mayors.

One of the core tenets of a reliable broker is their ability to deliver votes. Thus, legislators will seek out local-level politicians because they have proven that they can mobilize local voters. In order to determine which local politicians can most effectively translate club goods into votes, however, legislators will consider whether the local politician has built a clientelist network. Clientelist networks suggest the presence of a local voter network that can be incentivized using clientelist benefits. I argue that legislators are more likely to provide club goods to municipalities where the mayor has invested in building a clientelist network.

I present a novel estimation strategy to determine the prevalence of clientelism in each municipality. In order to estimate clientelism, I use a Bayesian Mixed-Membership model. My estimates of municipal clientelism allow us to understand how local-level dynamics affect club good allocation because they highlight the variation in the use of clientelism within a single country. I estimate the use of clientelism at the municipal level in Colombia and use these estimates to test the theory that municipalities where mayors have invested in building stronger clientelist networks are more likely to be chosen as brokers for club goods benefits.

I test the theory in Colombia for two reasons. First, in Colombia there are both weak political parties and high number of non-partisan citizens. As a result, Colombia fits the scope conditions of where I would expect legislators to rely on local-level politicians to help them translate club goods into votes. Second, politics in Colombia are largely non-

programmatic, so many politicians depend on clientelism to help target voters. I find that municipalities with higher rates of clientelism are more likely to receive club goods, even after controlling for other factors found to increase the use of clientelism. This is particularly noteworthy since in Colombia, mayors cannot serve consecutive terms—an electoral rule that should reduce the benefits of building relationships through iterative clientelist interactions—yet clientelism continues to bring resources to municipalities.

1 Clientelism in Modern Democracies

Traditionally, clientelist relationships are maintained through a strict hierarchy: clientelist parties will enlist brokers to distribute resources to voters in a way that helps maximize vote share (Stokes, Dunning, Nazareno & Brusco 2013, Kitschelt & Wilkinson 2007). At each step in this hierarchy, moral hazards arise as politicians monitor brokers who make sure voters behave as expected. In this framework, political parties play a central role in coordinating the selection and monitoring of well-embedded and reliable brokers in an attempt to overcome moral hazard problems.

The moral hazard associated with targeting voters through clientelism is compounded by several features of modern democracies. First, the rise of the secret ballot makes it increasingly difficult for brokers to monitor the voters they target (Gingerich & Medina 2013). Second, in contexts where citizens are largely non-partisan, clientelist parties face challenges identifying brokers who will be loyal to the party machine and able to identify swing and loyal voters (Holland & Palmer-Rubin 2015). Finally, the nature of campaigns creates an incentive to use programmatic appeals that make it difficult to disentangle votes won as a result of clientelist strategies from votes that are the results of programmatic campaigns (Palmer-Rubin 2018, Greene 2017). Since political campaigns expect candidates to send messages concerning issues, there is pressure to use campaigns to signal policy rather than capacity to deliver targeted goods (Greene 2017). Furthermore, clientelism can be more difficult in

decentralized contexts. This is because increases in political party fragmentation (Ryan 2004) and deinstitutionalization have made political parties less important in coordinating candidate strategies (Dargent & Muñoz 2011, Novaes 2014).

Despite these obstacles, clientelism continues to be an effective strategy used by politicians. Unlike programmatic appeals, clientelist appeals can incentivize loyal voters to turn out and can increase the visibility of a party or campaign when there are a high number of political parties (Muñoz 2014). While decentralization has created challenges for political parties building clientelist networks, the devolution of power has facilitated vote buying in smaller jurisdictions (Khemani 2010, Gervasoni 2010, Gingerich & Medina 2013, Devarajan, Khemani & Shah 2009). Low partisanship, political uncertainty, and the unintended consequences of democratic reforms have reduced the incentives for politicians to practice programmatic politics. The consequence is that, while clientelism has many drawbacks, it is an effective way to targeting individuals rather than just organized constituencies (Roberts 2002).

Even though political parties cannot control clientelist networks in much of the developing world, studies of the use of clientelism are still largely focused on clientelist parties and the linkages that parties use to target voters (Kitschelt 2000, Luna 2014). Many theories of clientelist strategies implicitly treat the party as the main driver of clientelism. For example, studies of political brokers emphasize the importance of partisan alignments for broker success (Stokes et al. 2013, Larreguy, Montiel Olea & Querubin 2017, Bueno 2017, Khemani 2010). Furthermore, even in studies focusing on low-capacity parties, clientelism is treated as a strategy that can send signals about candidate competence and viability (Muñoz 2014).

How, then, do politicians adapt their clientelist strategies for weak political party and low-partisanship environments? Some of the ways politicians have modified their strategies include both changing where they target voters and how they provide clientelist benefits. For example, politicians have changed where they target voters, with workplaces acting as

key locations to mobilize voters, particularly when firms have strong ties to the government (Frye, Reuter & Szakonyi 2014). Alternatively, clientelism has become more indirect, with politicians buying votes through the non-enforcement of laws that directly target the poor (Holland 2015) and the implementation of welfare programs that directly target low-income populations (Penfold-Becerra 2007, Lucciasano & Macdonald 2012). Finally, politicians have outsourced vote buying to interest organizations creating different classes of brokers who can be embedded in parties, interest organizations, or both (Holland & Palmer-Rubin 2015), reducing the reliance on party machines.

I build upon our understanding of party-driven clientelism and the various challenges that politicians using clientelist strategies face in order to build a theory of how club goods can be used as a clientelist benefit in the context of weak political parties. Existing studies of clientelism have shown that politicians have become more creative in selecting brokers. These brokers can include individuals embedded in business or civil society organizations or entrepreneurial individuals who act outside organized groups (Holland & Palmer-Rubin 2015). Further, the literature has shown that there has been a movement towards indirect forms of clientelism. In the next section, I explain how one particular type of independent broker, local politicians, can work with national politicians to deliver club goods without relying on a party machine. Club goods are a particularly interesting type of indirect clientelist benefit because they are particularistic goods that can reach a larger community of citizens. I will demonstrate that a mayor's ability to mobilize voters using clientelist strategies helps explain where legislators will target voters using club goods.

2 Theory

2.1 Club Good Clientelism

The resources that legislators have access to, and the way in which legislators choose to distribute funds, is often mediated by political parties. Since political parties have the influ-

ence to coordinate central strategies and build party brands (Lupu 2013, Lupu 2014), they can influence which types of voters are targeted and the most effective benefits for targeting these voters. However, when political parties do not have the internal capacity to maintain a strong clientelist machine and cannot identify reliable brokers, national legislators need to find alternative ways to reach brokers. National legislators lacking a strong clientelist machine to target voters need to find a strategy that allows them to control both the allocation of the benefit and the broker who distributes the benefit. I argue that these conditions are met when national legislators provide club goods, or excludable public goods, for particular municipalities.

Club goods are public benefits that only reach one group of voters. For example, a club good may be a new water treatment facility that can only clean water for one neighborhood or a road that connects a small group of rural farmers to the center of town. In both of these examples, the central feature is that only a very small subset of the population is able to benefit from what would otherwise be a public good. As such, club goods can be treated as clientelist benefits that can incentivize voters to support a politician in exchange for access to the good. The group of voters who benefits from a club good have a sense of obligation to repay the politician who provided that good (Lawson & Greene 2014). While investing in the infrastructure necessary to provide club goods is costly, they are useful benefits because they are remarkably flexible. The politician has control over not only what benefit is provided, but also the scope of voters who can be reached and the specific public contracts that provide the good. This is a broader strategy that can act as a middle-ground between a universal programmatic appeal and narrowly targeted gifts of cash for votes. Further, club goods are indirect. While a group of rural farmers may be targeted by the new road, a wealthy shop owner in the center of town is less likely to object to these funds than if the farmers were to receive cash incentives for their vote.

When providing club goods to citizens, legislators have two opportunities to emphasize the norms of quid-pro-quo exchanges. First, legislators are responsible for determining what

firms and workers receive contracts to construct the infrastructure necessary for providing club goods. For these firms, future work is contingent on continuing to support the legislator. Second, the group of people who receive the most benefits from the club good can be enticed to continue supporting the legislator in order to continue receiving benefits. This offers two clientelist benefits: a direct benefit mirroring patronage in the hiring practices surrounding club goods and an indirect benefit of using goods provided to a community, rather than an individual, that may help dissuade the concerns of voters who equate clientelism with corruption (Greene 2017, Weitz-Shapiro 2012).

When deciding whether to include club goods in their portfolio of clientelist strategies, national legislators are constrained by their desire to maximize expected vote share and minimize political risk.¹ As a result, national legislators will provide club goods to areas where they expect the club good will have the largest effect in increasing the legislators votes. In order to do so, legislators in weak party systems will seek alternative brokers who can help translate club goods into votes. Specifically, they will seek brokers who can be incentivized to deliver votes and who have access to networks receptive to clientelist benefits.

There are a variety of independent brokers who can help to distribute club goods, such as local business leaders, influential families, and local elected officials. What these brokers have in common is that they have strong ties in small networks and have the influence to oversee club goods provision. Since club goods often require coordination between the actor funding the project—in this case the legislator—and the actor overseeing the provision of the club goods—in this case the local broker—these brokers need to be in positions of power that lets them monitor the distribution of club goods. In the next section, I focus my analysis on one type of alternative broker, mayors, who can help translate club goods into votes.

¹Political risk refers to providing club goods where there is a low probability of electoral success

2.2 Using Mayors as Brokers

I focus on one particular type of local broker: mayors. Mayors are particularly effective brokers of club goods because of their administrative capacity to oversee club goods distribution. By nature of their position, mayors are often responsible for implementing local projects, including those that can be classified as club goods. This allows them to control *where* in a municipality club goods are located, *how* club goods are made available to voters, and *who* receives contracts to build the necessary infrastructure for club goods. Since mayors are also elected officials—and therefore have independent incentives to mobilize voters—they have independent resources that they have invested to create their own voter networks. For legislators, this means that mayors have a potential voter block they can deliver who have already demonstrated their loyalty. Consequently, using mayors as brokers offers legislators the necessary knowledge about voters' needs and preferences to help them customize club goods to local contexts.

However, mayors are not perfect brokers. Just as political parties need to try to find reliable brokers who will deliver votes, legislators building their own networks seek out mayors who they trust can deliver votes. How, then, do legislators select which mayors to work with? I argue that they focus on the mayors demonstrated ability to mobilize voters using clientelist linkages.

2.3 When and Where are Club Goods Used

In order to decide where to target club goods, national legislators will consider the characteristics of both the municipality and its mayors. Both features are important because they help determine where providing club goods is most likely to increase vote share. The demographic characteristics of municipalities help legislators identify where voters may be most receptive to club goods while the characteristics of the mayors help legislators identify where they are most likely to work with reliable brokers. Legislators prefer to provide club goods to municipalities where providing goods is relatively inexpensive in order to reach

more municipalities. Likewise, legislators will prioritize municipalities with poorer citizens since poor citizens are more likely to accept clientelist benefits (Weitz-Shapiro 2012). Thus, legislators will prioritize municipalities with a higher level of material need.

More important, however, is a legislator's ability to target mayors who will act as reliable brokers. First, the national legislator will look at whether the local mayor already has a clientelist network in order to gauge the strength and cohesion of the mayors local network. A national politician will provide a club good when the mayor is able to provide access to a stable voter network that can be targeted with clientelist benefits. For legislators, targeting municipalities where the mayor does not have a large voter block is an ineffective use of their resources.

As a result, national legislators are more likely to provide club goods to mayors who already have preexisting clientelist networks. This is because when a mayor can punish citizens who fail to support the national legislator, she is more appealing to the national-level politician since she can credibly deliver votes. I argue that national politicians will prefer mayors that send a signal that they can monitor voter behavior because these mayors have independently maintained voter networks. This signal can come in the form of the mayors' private funds used in campaigning, use of personal networks in filling bureaucratic positions, or ability to maintain voter networks even after sitting out a term. For example, in one municipality in the Antioquia department of Colombia, a mayor and his friend run in alternate terms, creating continuity in a system that does not allow for consecutive terms while a childhood friend of both politicians serves in each cabinet ². The national politician will evaluate both the presence and the strength of clientelist networks when deciding whether to use club goods.

An alternative explanation would suggest that legislators prioritize municipalities with popular mayors. However, I argue that clientelism is more important than popularity because it shows not only that mayors can receive votes, but also that the citizens can be targeted

²Interview Conducted October 2018

through clientelistic, rather than just programmatic or personalistic, linkages (Luna 2014).

Another alternative explanation is to prioritize mayors who occupy the same political party as legislators because they are easier to punish if they fail to deliver votes. However, in weak party contexts, there is less party discipline. Thus, while there can be a reputation cost associated with failure to deliver votes, it is less likely that this reputation cost will shape the candidates' political future. The benefit of using copartisan mayors as brokers is even smaller where citizens are non-partisan and will not see party as a meaningful label when deciding how to vote. Thus, the presence of a clientelist network is still the largest indicator that a mayor can deliver votes.

These conditions for securing contracts lead to two related hypotheses. First, a national politician will be more likely to provide club goods in municipalities with high levels of material need. Second, legislators are more likely to provide club goods to mayors who maintain clientelist voter networks.

3 Data and Methods

In order to test where legislators will allocate club goods to attract voters, I consider the case of Colombia. Colombia is a particularly interesting case for several reasons. First, Colombia has changed from a strong two-party system to a multi-party system where parties have limited internal capacity since the 1991 Constitution. This creates a system where, as one legislator in Colombia explained “the party is merely a name on a list.”³ General consensus among mayors, legislators, and bureaucrats is that political parties in Colombia have very little power—they do not contribute to campaigns, party members do not act cohesively in the legislature, and, as a result of the open-list proportional representation system, parties have little say on which party candidates from the electoral lists assume office.

Second, Colombian citizens have very low levels of partisanship. Citizens are much more likely to identify with an elected official—for example as supporters of former president Álvaro

³Interview conducted November 2018

Uribe or former president Juan Manuel Santos—than the political party to which these officials belong. Consequently, it is difficult to identify party loyalists while campaigning. Since most parties do not use programmatic campaign strategies, citizens will look towards other cues to determine which politicians to support.

Third, Colombia is a unitary state with high levels of administrative decentralization. At the municipal level, mayors are responsible for local infrastructure, but they are largely dependent on central government transfers. Municipalities have limited ability to levy taxes on citizens, so they have very little income that is not gained through transfers from the national government. Therefore, club goods are particularly valuable benefits. Moreover, most club goods take the form of discretionary transfers—where municipalities receive money for projects from the central government in order to pursue municipal development goals. To analyze where club goods are provided, I consider the allocation of discretionary fiscal transfers. By focusing on these discretionary transfers, I am able to separate club goods from the guaranteed fiscal transfers that are used for non-excludable public goods. This allows me to narrow my analysis to only transfers that can be politicized. In particular, the value of discretionary transfers, and the per capita transfers received from the central government, the number of projects approved and contracted by the national government, and the value of the projects that are approved and contracted.

Finally, in Colombia, mayors are not allowed to serve two consecutive terms. This should disincentivize mayors from using long-term clientelist appeals because they need to wait a full term before encouraging voters to reelect them. In the interim, voters have limited interactions with the former mayor since these mayors tend to spend the off-term in bureaucratic roles at the department level or as aids to legislators at the national level.⁴ If a mayor hopes to run for a different political office, they must resign from their current political post a full year before running to avoid potential conflict of interest. As a result, mayors need to trust that voters will continue to support them despite the lag between their time as mayor and

⁴Information gained through interviews with mayors and local bureaucrats from July 2018-December 2018

the next election. Given these constraints, Colombia is a hard test of the theory—immediate gains from clientelism are limited and institutional rules should limit long-term payoffs.

3.1 Club Goods in Colombia

One method for receiving club goods in Colombia is through royalty transfers. The royalty transfer process is particularly compelling for the purpose of this study because it is designed to be a largely apolitical process where royalty funds are provided to the municipalities who are best able to execute local development projects. The money for royalty transfers is collected from municipalities with extractive economies, mostly those with large mining industries, and is redistributed across the country into a variety of dog-eared financing sources. Through the royalty system, there are funds for regional-level development, department-level development, areas particularly affected by the civil conflict, and projects advancing science, technology and innovation. A new law implemented in 2012 reformed the royalty process to allow all municipalities to receive royalty funding, particularly through the regional and departmental funding sources. Applying for royalties is a streamlined process: municipalities complete applications proposing a development project and justifying how it relates to local, departmental, and national development goals. They discuss other forms of funding they are applying for and how they plan to implement the project. The project is then reviewed by a Collegiate Administrative and Decision Body (OCAD), who vote to determine which municipalities receive funds. The OCAD includes votes from mayors, governors, and national ministers and is the ultimate decision-making body for determining who receives discretionary royalty transfers. Since legislators can attend and comment on OCAD decisions, they can influence the decision-making process even though they cannot vote to determine which projects ultimately receive funds.

The way OCAD bodies coordinate depends on the particular region or department, but their decisions often occur during online conferences. Decisions are made by the voting members based on the applications received by the OCAD. Receiving royalty funds from

OCADs is quite difficult. As one mayor in the Antioquia department explained, “You cannot count on funds from royalties and always have to think about what other grants can help fund improvements.”⁵ Each department or region has autonomy in selecting which mayors, governors, and ministers make decisions for a particular OCAD.

In interviews with departmental planning bureaucrats about OCAD decisions, they emphasized that the intention is not to use politics to distribute benefits, but concede that it is impossible to completely omit political considerations. Several interview subjects emphasized the importance of the governor’s preferences. The bureaucrats who vote on behalf of governors consider the governor’s political strengths and alliances when placing their votes. Similarly, they explain that it is possible for savvy politicians with strong ties to ministers to use their influence to sway OCAD decisions.⁶ Thus, while this system is billed as the apolitical alternative to the widely criticized “jam” system, where legislators provide investments to municipalities “under the table”, it is an alternative venue that can be manipulated by entrepreneurial politicians who use the existing institution to further their networks. Transparency initiatives make royalty data widely available, making it possible to see which municipalities have projects approved, how much the projects are valued, and how transfers are allocated across the country. In the Colombian case, therefore, focusing on projects and transfers through the royalty process is a hard test of which municipalities receive club goods.

3.2 Dependent Variables

I consider club goods in the form of two different types transfers. The most transparent type of transfer occurs through the Sistema General de Participación (SGP). This is a guaranteed transfer that all municipalities receive. The value of the funds are determined by a formula based on the municipalities population, financial performance, and level of need. This process is apolitical, so any effect on clientelism should be a consequence of the relationship between

⁵Interview conducted in October 2018

⁶Interviews conducted August 2018-November 2018

clientelism and municipal demographics. I consider the logged transfers per capita through the SGP in millions of pesos.

Second, I consider transfers through the Sistema General de Reglarías (SGR). In order to receive funds through this process, municipalities must complete an application for a public works project that is approved by an OCAD. I consider the transfers through the SGR by looking at the logged discretionary royalty transfers each municipality receives, the number of projects contracted in a municipality, and the logged value of projects that are contracted. The discretionary royalties transfers reflect the logged value of all discretionary royalty transfers in millions of pesos. In order to focus more directly on the projects that are approved and receive contracts, I then focus explicitly on projects approved through the OCADs. First, I consider the number of contracted projects. This variable represents the number of projects that were both approved by an OCAD and begin construction during a calendar year. There are three types of projects: those contracted, those approved but not contracted, and those completed. I focus on the number of contracted projects in order to emphasize projects have been fully cleared and are not merely a promise of future development. Then, I look specifically at the logged value of the contracted projects. By focusing on both the number of projects and the value of the projects, I gain additional insight into the Colombian transfers process.

3.3 Estimating Municipal-Level Clientelism

In order to test the effect of local clientelism on whether a municipality receives club goods, I need to measure clientelism. Clientelism cannot be observed since the exchange of money, goods, or jobs for votes is not documented in budgetary records or documents. However, a measure of clientelism that can identify differences in the extent to which politicians use clientelist linkages- rather than just a dichotomous measure of whether clientelism is present- is essential for testing how clientelism influences which municipalities receive club goods.

The challenges in measuring clientelism have been addressed by the literature in two ways.

First, in-depth qualitative studies of clientelism have provided evidence of how clientelism occurs at the local level, highlighting municipalities where clientelist interactions are particularly common (Abers 1998, Muñoz 2014, Ocampo 2014, Zarazaga 2014). While these types of measures are exceptionally rich, they cannot be applied to other municipalities because of the focus on specific interactions between particular municipal actors rather than general characteristics of the municipality and its citizens. The second way clientelism is measured is through the use of survey list experiments designed to elicit sensitive information (Blair & Imai 2012, Blair, Imai & Lyall 2014, Greene 2017). This measure is more broadly applicable, allowing respondents who see a list of potential activities to reveal how many—as opposed to which—activities apply to them. This measure minimizes concerns about under-reporting due to desirability bias, but it is difficult to scale-down to the local level because it requires a high number of respondents. Finding the necessary sample size is a particularly difficult task in small rural municipalities where theories suggest clientelism is most likely to happen (Gingerich & Medina 2013).

In order to overcome these challenges, I create a new, original measure of clientelism that can identify municipal-level differences without limiting the analysis to municipalities where field work can be conducted or conducting large-scale surveys that may drop many small municipalities from the analysis. To do so, I focus on patronage—a particular form of clientelism where jobs are exchanged for political support—to estimate the level of clientelism more broadly. Interviews with bureaucrats throughout Colombia identify patronage as one of the most common forms of clientelism at the municipal level. As one mayoral assistant in the Valle de Cauca department explains “bureaucratic jobs are given based on political support.”⁷ Other interview subjects emphasize the importance of temporary jobs in clientelist interactions arguing that when there are jobs that need to be filled—but cannot yet be filled through slow bureaucratic channels—mayors can fill temporary vacancies with people who will support the local government. Unlike direct gifts of cash or material goods, patronage is

⁷Interview conducted July 2016

possible in even the poorest municipalities. Since patronage is a long-term clientelist strategy that involves iterative interactions, I expect that municipalities with high levels of patronage demonstrate a substantial investment in building clientelist networks and are more likely to use other clientelist strategies.

Much like clientelism, patronage cannot be directly observed. Local records will never explicitly indicate that an employee was hired because they are a “friend of the government” or that an employee is paid for a job that doesn’t actually exist. However, unlike clientelism writ large, patronage can be estimated based on available data that identifies who public employees are, what jobs they are hired to perform, and their basic qualifications. The method I use to translate this information about public employees into a widely applicable and nuanced measure of municipal-level clientelism is a Bayesian Mixed-Membership model.

I use a Bayesian Mixed-Membership model in order to estimate to what extent public hires are selected for political gain. The intuition is simple: Each individual is nested in a municipality and can be hired for a public job based on their qualifications or for clientelist motivations. While one single observable characteristic of a public service employee cannot determine whether or not clientelism played a role in the decision to hire that candidate, the combination of characteristics of each employee provides a full picture of why that candidate may have been chosen to fill a public position. With each additional new employee in a municipality, patterns begin to emerge that suggest certain characteristics occur more often than others. Ultimately, this makes it possible to estimate to what extent candidates are hired for political—rather than meritocratic—reasons. For example, an employee who is educated for the subject they are teaching, paid through national transfers for education spending, receives a small bonus, and is stationed in a single school is likely to be hired for different reasons than the employee who is not educated for the class they are teaching, paid through a municipality’s private funds, receives a small bonus, and is in a “floating” position between schools. In this example, the latter candidate is more likely to have received the position for political reasons. As we see more public employees whose profile mirrors the

second example, rather than the first, it suggests the municipality is using more patronage-based hiring practices than meritocratic hiring practices. Using a similar logic to topic models, where patterns in words suggest what topic a text speaks to (GrGross & Manrique-Vallier 2014), in the mixed membership model patterns in employee characteristics suggest to what extent the employee may have received their job for political gain.

I analyze two classes of hires, which I call the “meritocratic” class and the “patronage” class. In the meritocratic class, hiring decisions are based on (1) whether the municipality has a position to fill and (2) whether the candidate is qualified to fill the position. We would expect meritocratic hiring decisions to be made when these two conditions are met. In the “patronage” class, decisions are made based on whether the hire is politically advantageous. This can occur when a position is created solely to fill it with an ally or when the candidate is under-qualified for the position. Of course, some candidates have the distinct advantage of filling both roles: they may be filling a newly created position and be qualified to fill this new, albeit unnecessary, opening. Mixed membership allows candidates to be both qualified *and* political.

In Bayesian inference, the posterior distribution used for inference is proportional to the product of some likelihood function using data and prior expectations based on outside information. In order to estimate the use of clientelism, my likelihood function depends on data about the observed characteristics of the public service employees conditioned on prior information about the municipality where these employees work.

At the individual level, I use data on teacher hires. I use a series of dummy variables that highlight features of both the job filled and the employee themselves. I isolate several indicators associated with clientelism: the employee’s qualifications (if their education matches the job they receive), whether they are stationed in a rural or urban area within the municipality, how they are paid, what type of position they fill, how fixed their position is (are they in a classroom or is it a floating position), whether they received a bonus, and whether they belong to a particular ethnic group. These characteristics should occur at different

rates depending on if the teacher is hired for meritocratic or political reasons. For example, a teacher who is educated for the subject they are teaching is much less likely to reflect patronage than one whose education is not aligned with the position they were hired to fill. I create a total count of how frequently each trait occurs in any given municipality. I posit that these features of employees are characterized by a mixture of binomial distributions. Using this mixture, I am able to predict the probability that each characteristic is observed in a world where all hires are patronage-based versus one where all hires are meritocratic.

Next, I condition these estimates for how often hires tend to correspond with the patronage class using prior information about each municipality. I focus on three indicators that can affect to what extent hires are likely to be clientelist: household enrollment in social programs (as a measure of need), population (clientelism tends to occur more often in smaller municipalities), and a fiscal responsibility indicator (reflecting how efficient municipalities are with their funds). This conditions the information about each employee on the municipality where he is employed.

The posterior distribution after multiplying the likelihood function and the prior information is a mixture of binomial distributions representing the likelihood of the observed patterns of hires occurring in the patronage or meritocratic classes. In order to determine these parameters, I estimate a parameter π_m , that estimates the extent to which hiring decisions are meritocratic. In order to estimate to what extent hiring decisions are based on patronage, I simply calculate $1 - \pi_m$. Since the measure focuses on how often different attributes occur, it can use the similarities between employees to determine to what extent public sector employees, on average, are political rather than meritocratic.

The full model can be characterized as follows:

$$Y_{mj}|\theta, Z \sim f(y_{mj}|\theta_j, z_{mj})\forall m, j \quad (1)$$

$$\theta \sim \beta(1, 1) \quad (2)$$

$$z_{ij}|\pi, n \sim \text{Binomial}(\pi_m)\forall m, j \quad (3)$$

$$\pi_m|n \sim \text{Beta}(\mu_i, \phi)\forall m \quad (4)$$

$$\phi \sim \text{Gamma}(2, 2) \quad (5)$$

$$\mu_m|\gamma = \text{Logit}^{-1}(\mathbf{A}\gamma_m)\forall m \quad (6)$$

$$\gamma \sim N(0, 10) \quad (7)$$

Where:

m = The municipal indicator

j = The indicator for each observed characteristic of public employees

n = The number of temporary hires within the municipality

y_{mj} = The profile of indicators j in municipality m

θ = Parameter for generating distribution for indicator j

Z = Indicator for if observed characteristic j is a manifestation of patronage

π = The proportion of hires that indicate patronage

μ = The expectation of clientelism in each municipality

γ = Coefficients for municipal indicators

\mathbf{A} = The matrix of demographic information for each municipality

This model is generalizable and can be used to estimate rates of patronage in any municipality where data on public hires is available. While I focus specifically on teacher hires, my empirical strategy can be applied to bureaucrats, post office employees, or any type of public

sector worker. In Colombia, teacher positions are some of the most common public service positions that become available annually in both urban and rural municipalities. Due to the slow nature of the civil service system, municipalities rely on temporary hires, in addition to permanent hires, to fill positions of classroom instructors, education directors, and guidance counselors. Through the civil service, teachers need to receive special training to ensure that these educators are qualified. However, in temporary hires the requirements are quite lax, giving the local government discretion over who fills these positions. Focusing on teacher hires creates distance from the funds that mayors can receive through royalty transfers since the salaries of teachers are predominantly funded through guaranteed fiscal transfers that are dog-eared for health and education. Teachers, therefore, can be recipients of patronage that is separate from the royalty transfer process.

The estimates of patronage at the municipal-level should provide a strong measure of relative levels of clientelism across municipalities. A map of Colombia, where darker red indicates higher levels of clientelism at the municipal level, can be seen in Figure 1. Gray municipalities reflect missing data, which occurs in Southern and Eastern Colombia where, due to small populations, divisions are classified as *corregimientos* rather than municipalities that do not report equivalent demographic information and in municipalities where no temporary teachers were hired or data is missing on municipal-level characteristics.

I validate this measure using survey data from the Latin American Public Opinion Project in 2012-2014. I find that respondents in municipalities with higher estimates for clientelism are more likely to respond that their government is doing nothing to combat corruption and more likely to respond that corruption is widespread. I use ordered logit regressions where the dependent variable is the citizen's responses to the survey questions and the independent variable is my estimate of clientelism in that respondent's municipality. In both cases, my measure of clientelism is statistically significant in the expected direction.⁸

⁸See appendix for full validity checks and analysis

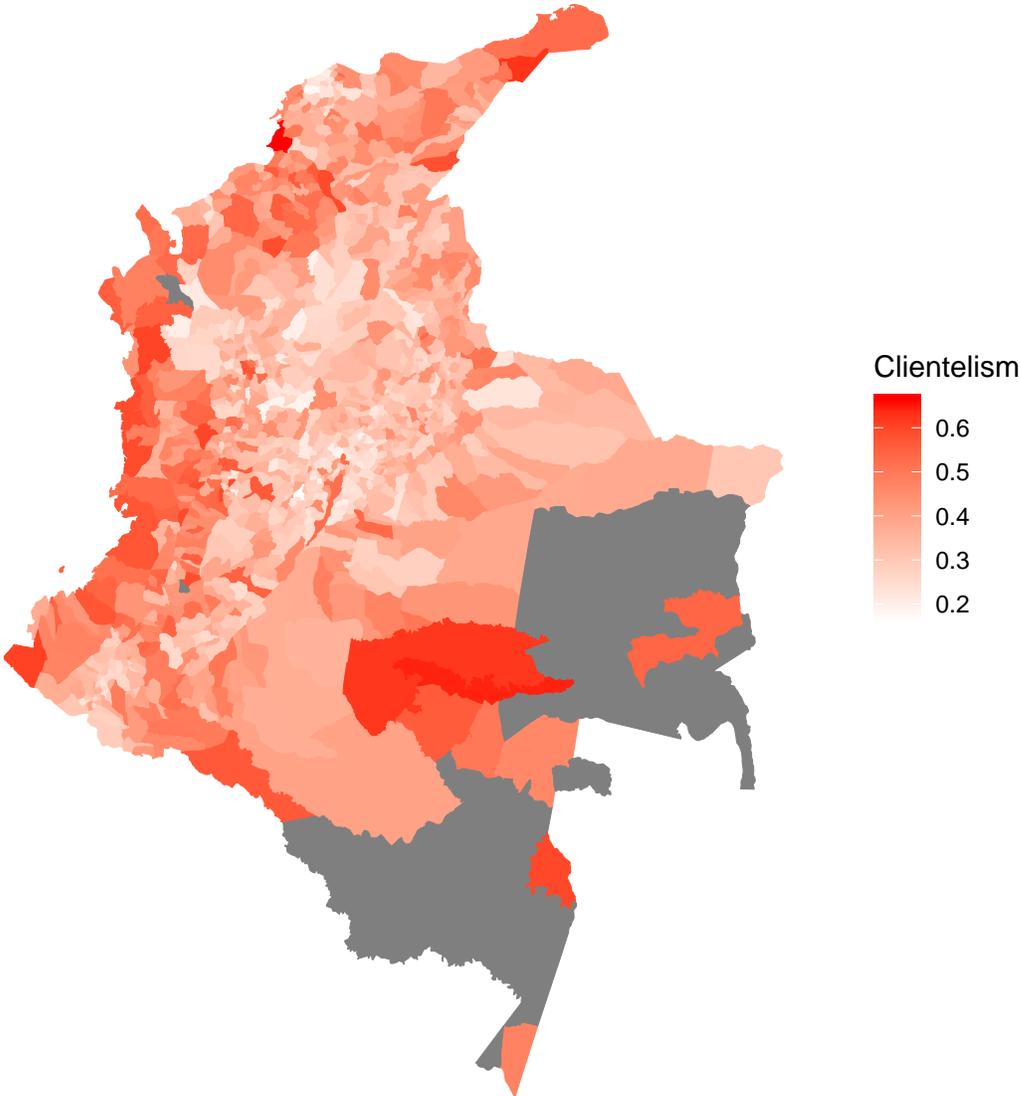


Figure 1: Estimate of Clientelism in Each Colombian Municipality

3.4 Independent Variables

Other independent variables central to the analysis are the proportion of the population who have valid SISBEN records as a measure of need within the municipality. SISBEN is a system in Colombia for identifying vulnerable populations who receive additional social assistance. Thus, the proportion of the population who have valid records reflects how much need there is inside the municipality. In order to calculate the SISBEN measure, I divide the number of valid SISBEN records in each municipality by the total population in that municipality.

I also control for two key alternative explanations. First, I test if transfers are instead allocated to popular mayors. In order to measure this, I calculate the margin of victory using the difference in the percent of the vote received by the winning mayor and the second-place candidate. If transfers were a product of the mayor's popularity, I would expect mayors with a larger margin of victory to receive more transfers. Second, I test if the transfers favor copartisans. In order to do this, I create a dummy variable for Partido de la U, the party of the president and the majority party in Congress from 2012-2015. I assign a value of one if the mayor serving from 2012-2015 is from Partido de la U and zero otherwise. This measurement captures the idea that transfers favor the current ruling party.

Finally, I consider less popular alternative explanations. If the allocation of funds were meritocratic, rather than a form of clientelism, I would expect that municipalities that are better at managing their finances would receive more fiscal transfers. Thus, I control for the government-assigned fiscal responsibility score. In more meritocratic systems, I would expect higher scores on fiscal responsibility to correlate with more discretionary transfers. A similar indicator of meritocracy could be whether the municipalities receiving club goods are urban or rural. In general, I would expect rural municipalities to have higher levels of need. Thus, I would expect more rural municipalities to receive more club goods, even controlling for need and clientelism. Finally, I consider the case where more transparent municipalities are more likely to receive additional funds. In order to do this, I control

for an indicator for local government openness. If the OCAD was making decisions solely based on which municipalities requesting funds were likely to use them responsibly, I would expect municipalities with higher openness scores to receive more discretionary transfers. The local government openness indicator is collected by the Colombian government and considers municipal transparency where higher levels reflect more transparent municipalities. Unlike the clientelism variable, this variable focuses on the procedures the municipality follows rather than potential corruption or clientelism. Openness and clientelism have a small Pearson's correlation coefficient of -0.079, alleviating concerns about possible colinearity. In fitting the model, I include the total population of the municipality and year fixed effects.

3.5 Methods

I test my hypotheses using data from 2012, when the rules governing royalty transfers in Colombia changed to open transfers to all municipalities, through 2015. This time period covers one mayoral term. I estimate clientelism in 2013, halfway through each mayors term. I test the hypotheses that municipalities with high levels of need and municipalities with high levels of clientelism are more likely to receive club goods. I conduct my analysis using two categories of transfers.

First, I consider transfers where the allocation process is most transparent. High transparency transfers occur through the Sistema General de Participación (SGP). These transfers are guaranteed to all municipalities and the value of the transfers are determined using a formula. I use ordinary least squared regression where the dependent variable is the logged value of SGP transfers.

Next, I test my hypothesis through analyzing medium-transparency transfers through the Sistema General de Reglarías (SGR). I do this using logged discretionary royalty transfers, logged value of contracted projects, and number of projects contracted. When considering royalty transfers per capita and the value of contracted projects, I use ordinary least squares regression to estimate the linear relationship between each independent variable and royalties

transfers. When considering the number of contracted projects, I use a zero-inflated poisson model to account for the reality that most municipalities do not receive any projects while very few municipalities will receive more than one project.

4 Results and Analysis

4.1 High Transparency Transfers: Guaranteed SGP Transfers

First, I test whether clientelism has an effect on transfers that are calculated through the SGP system. These transfers are entirely determined by a formula that considers population, need, and past fiscal performance of a municipality. There is no negotiation process in determining the amount transferred or the amount of autonomy that municipalities have over these funds. I model the total transfers received through the SGP system using an ordinary least squares regression. Clientelism should have a minimal effect on these transfers: while it should not influence the amount of funds a municipality receives, the factors that are most important for the formula are also factors that help predict clientelism in any given municipality. The full results of this model can be found in Table 1.

Given that the analysis is conducted using ordinary least squares regression, the coefficients can be interpreted as the change in the logged value of guaranteed transfers given a one unit increase in the independent variable. I find that both municipal clientelism and municipal need, measured as the proportion of citizens with valid SISBEN records, are positive and statistically significant. I expect that municipal need should be a substantial indicator of receiving formulaic transfers since they are designed to help the municipalities who most need funds. However, I find that clientelism is also positive and significant. Given that both of these variables are measured continuously from 0 to 1, I compare the effect size directly and find that the effect of need is more than double the effect of clientelism. Moreover, estimates of clientelism may also contribute to this estimate because clientelism is more likely to be observed in municipalities with higher levels of need.

	Logged Guaranteed Transfers Per Capita
Intercept	12.682*** (0.108)
Municipal Clientelism	1.351*** (0.094)
Proportion valid SISBEN	2.689*** (0.143)
Proportion Rural	0.473*** (0.037)
Fiscal Performance Index	-0.013*** (0.001)
Open Government Index	-0.002** (0.001)
Member of Presidents Party	-0.024 (0.018)
Mayor Election Competitiveness	0.001 (0.001)
Population	0.000** (0.000)
2013	0.227*** (0.022)
2014	0.244*** (0.023)
2015	0.322*** (0.023)
R ²	0.237
Adj. R ²	0.234
Num. obs.	3744
RMSE	0.477

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 1: Guaranteed Transfers

4.2 Medium Transparency Transfers: Royalties through SGR

Next, I consider transfers through the SGR process. While these transfers are not intended to be political, the voting process for determining whose projects are approved requires votes from municipal, departmental, and the national government. Thus, I expect that municipal-level clientelism should have a positive and significant effect on funds received through the SGR.

4.3 Discretionary Royalty Transfers

Royalty transfers are designed to be based on merit: municipalities apply with projects and a committee approves whether or not they receive the funding. They are difficult to get, and designed to be a largely apolitical process based on how the project aligns with national development goals and the municipality's ability to enact the project. However, as interview subjects suggested, having strong relationships with legislators who deliver goods to the municipality can help increase the likelihood of receiving these transfers because they can advise mayors of the best way to frame their applications. Furthermore, legislators may be invited to attend meetings to approve royalty allocations and can advocate for particular projects. As a result, this is a hard test of the theory: evidence that clientelism matters in these transfers suggests political motivations influence how applications are evaluated and money is distributed 2.

Unlike in the guaranteed transfers through the SGP system, in the SGR system municipal need has a negative statistically significant effect at the $p < 0.05$ level. This is particularly noteworthy since these royalty projects are designed to be largely need-based, but municipalities with higher levels of need seem to receive fewer royalties. Second, I find that clientelism has a positive and statistically significant effect. Unlike in the SGP system, this effect has a greater magnitude than the effect of need and is positively correlate with receiving more royalties transfers. When a mayor has a local clientelist network, they are better positioned to receive additional fiscal transfers.

In this test of the theory, I find support for the idea that when a mayor can act as a potential broker, they are more likely to receive club goods. Furthermore, the mayor's popularity and being a member of the majority party have no effect. Of the mayoral attributes that can facilitate access to central government resources, only the presence of clientelism has an effect. As seen in Figure 2, the log of discretionary royalties transfers, in pesos, increases as clientelism increases.

	Discretionary Royalty Transfers
Intercept	1.359** (0.599)
Municipal Clientelism	2.343*** (0.524)
Proportion valid SISBEN	-1.758** (0.794)
Proportion Rural	-0.417** (0.203)
Fiscal Performance Index	0.054*** (0.007)
Open Government Index	-0.020*** (0.005)
Member of Presidents Party	0.162 (0.101)
Mayor Election Competitiveness	-0.003 (0.004)
Population	-0.000 (0.000)
2013	2.353*** (0.123)
2014	2.633*** (0.125)
2015	2.190*** (0.127)
R ²	0.177
Adj. R ²	0.174
Num. obs.	3744
RMSE	2.648

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 2: Royalty Transfers

4.4 Approved Contracts

Next, I focus exclusively on the projects that were approved and received contracts in each municipality. I measure these in two ways: the number of projects that are approved and the value of these projects, in order to better isolate SGR transfers that can be used as club goods.

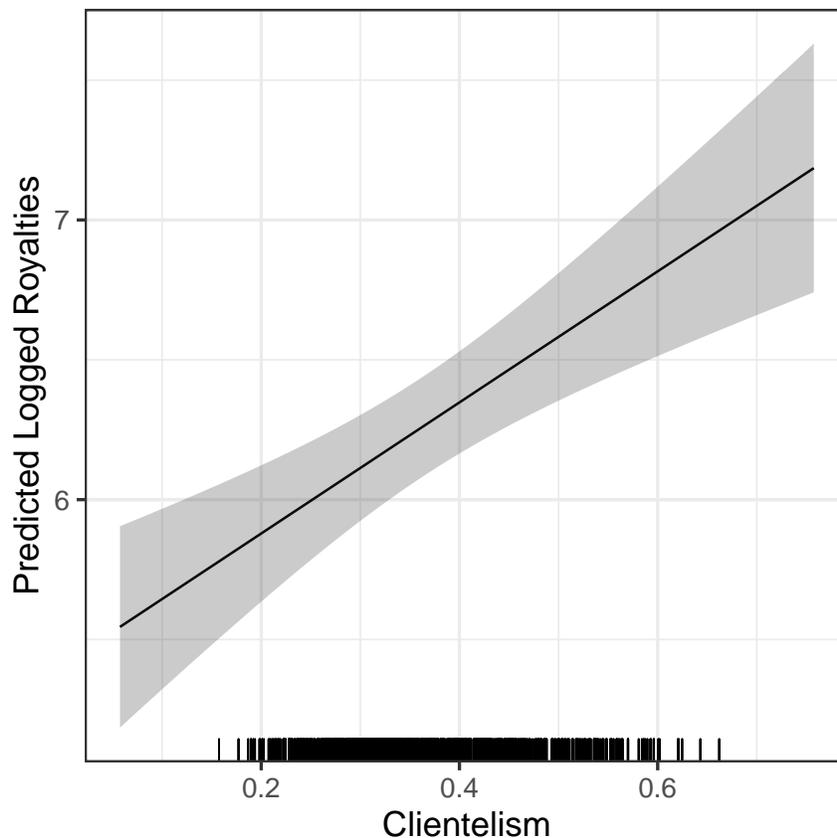


Figure 2: Discretionary Royalty Transfers

Number of Contracts

When testing how many contracted projects a municipality receives, I argue that municipalities with higher levels of clientelism will receive more contracts. I model the likelihood of receiving a contract using a zero-inflated poisson regression. The full results of this model can be found in Table 3⁹.

I find that the coefficient on the level of municipal need is negative. This suggests that, all else equal, contracts are given to municipalities with lower levels of need, running counter to the hypothesis.

I again find that clientelism is positive and statistically significant. This suggests that when municipalities have higher levels of clientelism, they are likely to receive more con-

⁹Alternative model specifications can be found in Appendix B

	Number of Projects
Intercept	-19.987 (540.112)
Municipal Clientelism	2.491*** (0.556)
Proportion valid SISBEN	-2.649*** (0.828)
Proportion Rural	-0.969*** (0.217)
Fiscal Performance Index	0.035*** (0.008)
Open Government Index	-0.014*** (0.005)
Member of Presidents Party	0.072 (0.116)
Mayor Election Competitiveness	0.010** (0.004)
2013	16.269 (540.112)
2014	17.554 (540.112)
2015	18.189 (540.112)
Zero Model: Intercept	0.337*** (0.125)
AIC	2562.433
Log Likelihood	-1269.216
Num. obs.	3744

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 3: Number of Projects

tracts. This further supports the hypothesis that legislators are more likely to provide club goods to municipalities where the mayor can act as brokers. When mayors build clientelist networks, they can more reliably deliver votes and are more desirable to national legislators. The expected number of contracts across levels of clientelism, with bootstrapped confidence intervals, can be found in Figure 3.

When considering the alternative hypotheses, I find that there is no statistically significant result for being in the same party as the President. While there are positive and

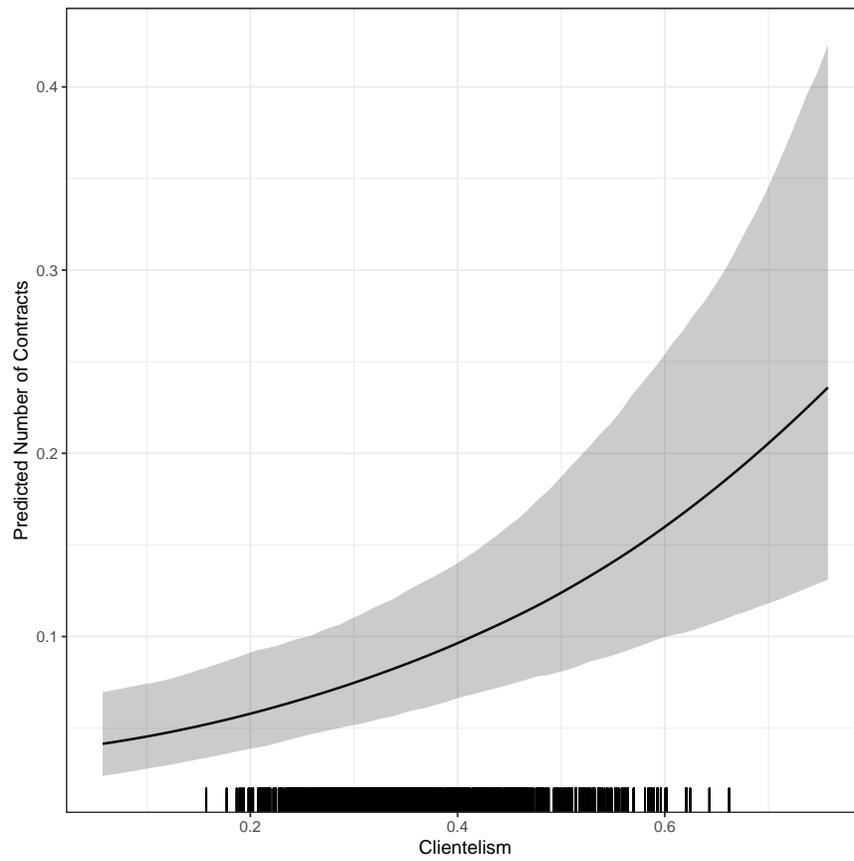


Figure 3: Expected Number of Contracts

statistically significant results for both the fiscal performance index and the mayor's popularity, these results have smaller effect sizes than clientelism. Furthermore, more transparent municipalities actually receive fewer contracts, all else equal.

These results provide interesting insight for the distribution of club goods. Regardless of need and other standard municipal characteristics, evidence of clientelist networks does, in fact, increase the number of contracts that municipalities receive. Holding all other municipality and mayoral characteristics equal, a municipality with higher levels of clientelism is also better able to secure these projects.

Notably, this effect holds regardless of the mayor's political party. There is no clear benefit for mayors who are copartisans when determining who receives funds for projects. This is important for considering the effect of clientelism: being a clientelist mayor matters, but the political party label does not facilitate improved access to funds.

Value of Contracts

Finally, I consider the value of projects for each municipality. Since it is rare for a municipality to receive more than one contract, considering the value of the contracts received by the six-hundred fifty-one municipalities that did have a project approved and contracted between 2012 and 2015 allows me to better isolate whether clientelism municipalities receive larger projects for their municipality, on average. If my hypotheses are supported, I expect that municipalities with higher levels of need and municipalities with higher levels of clientelism are both more likely to receive larger contracts. The full results of this model can be found in Table 4.

Once again, I do not find support for the hypothesis that municipalities with higher levels of need will receive more valuable contracts. Instead, I find that, all else equal, municipalities with more need will receive less expensive contracts. In part, this may be because these municipalities have more needs, so the projects that are approved tend to be more less expensive and still aid the municipality.

	Value of Contracts
Intercept	19.689*** (0.847)
Municipal Clientelism	1.974*** (0.731)
Proportion valid SISBEN	-2.963*** (1.091)
Proportion Rural	-0.974*** (0.291)
Fiscal Performance Index	0.032*** (0.009)
Open Government Index	-0.002 (0.007)
Member of Presidents Party	0.357** (0.147)
Mayor Election Competitiveness	-0.002 (0.006)
Population	0.000 (0.000)
2013	0.234 (0.194)
2014	-2.299*** (0.735)
2015	-0.089 (0.190)
R ²	0.129
Adj. R ²	0.114
Num. obs.	651
RMSE	1.591

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4: Value of Contracts

However, I continue to find support for the hypothesis that municipalities where mayors have built larger clientelist networks are more likely to receive valuable projects, as seen in Figure 4. In fact, clientelism has the largest effect size of the three independent variables positively correlated with the size of a contract— clientelism has a larger effect than fiscal responsibility or being a member of the president’s political party. Finally, the mayor’s popularity does not have an effect on the size of contracts received.

Together, the distribution of funds through the SGR process provide support to the

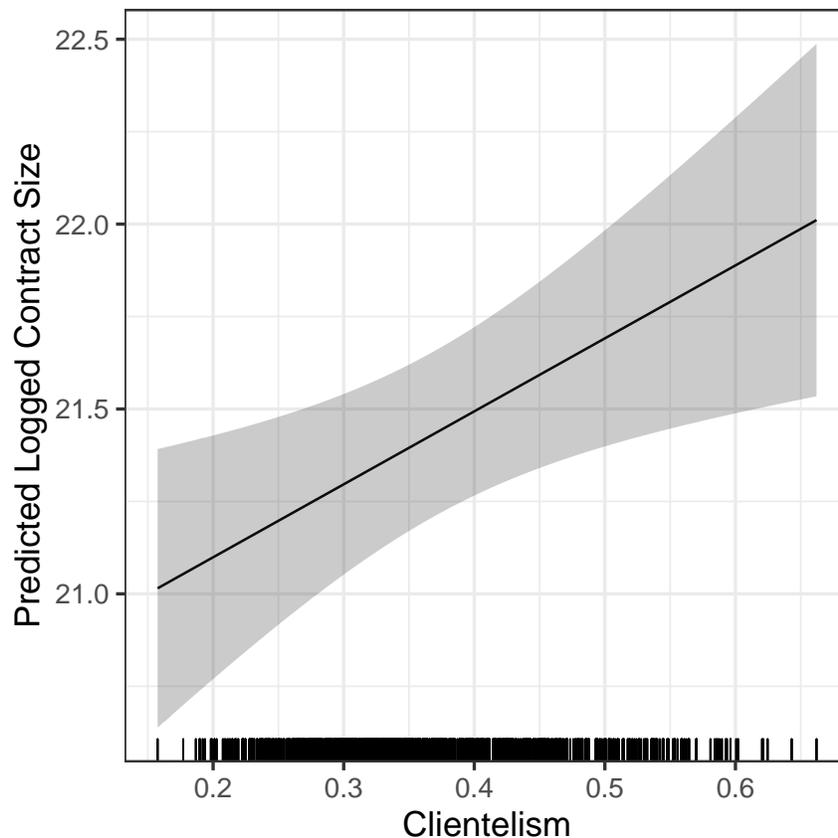


Figure 4: Value of Awarded Contracts

hypothesis that municipalities where mayors have a proven capacity to act as brokers are more likely to receive additional transfers from the central government. The budget available through royalties is limited, but municipalities where mayors have built larger patronage networks tend to receive more discretionary transfers, more contracted projects, and the projects they receive are more valuable. This holds regardless of political party and the mayor's popularity in their municipality.

Need, however, has a much less consistent effect. When focusing on transfers through the SGR process, need is negatively associated with the amount of transfers received, number of contracts, and value of contracts. This is noteworthy because it suggests that these transfers are not purely based on need— while higher need municipalities may also require fewer funds to have an effect, the reduced likelihood of receiving a contract shows that the system does

not necessarily direct projects to the highest-need areas of the country.

A meritocratic explanation for royalty transfers also provides limited support. In all three measures of transfers through the SGR system, fiscal performance is a positive and statistically significant. However, the effect size of this indicator is smaller than the effect of clientelism. Moreover, there is a negative relationship between open governments and receiving funds for both the total discretionary transfers and the number of contracts.

5 Conclusion

This analysis provides several key insights about how goods are distributed in weak party systems. If clientelism in weak party systems favors a movement towards club goods, then my analysis suggests that the importance of clientelism is two-fold. First, legislators are more likely to provide club goods to municipalities with preexisting clientelist networks. Second, and even more important, mayors will continue to use clientelism at the local level, perhaps to signal that they are reliable brokers for the legislator to use. While mayors do not advertise their clientelist networks, in Colombia many areas have rich historical clientelist legacies and politicians have clear, well-established, personal networks. Legislators, many of whom once served in more local-level positions, can identify central actors in their departments who control clientelist networks. For the mayors, continuing to pursue clientelist strategies is a way to bring necessary goods into the municipality.

In Colombia, mayors cannot serve two consecutive terms. In the short term, this may disincentivize the use of clientelism. Without the opportunity for reelection, a clientelist mayor needs to believe that their voters will continue to be loyal to the clientelist exchange on a longer time horizon. However, if clientelism is a cost that allows mayors to bring additional funds into their municipality and strengthen relationships with national legislators, using clientelism offers new benefits beyond building voter networks. Furthermore, these benefits might explain why local-level clientelism persists.

Early work on clientelism highlights the crucial role that mayors can play (Valenzuela 1977). However, as the study of clientelism has increasingly moved towards party brokers and how clientelism persists alongside programmatic campaigns, analysis of mayors has decreased in favor of considering what actors politicians will choose as brokers instead of local politicians. This has highlighted the risks of selecting another politician: competing interests mean that mayors may not always be willing to attribute credit to legislators. Particularly when the clientelist benefit is a club good, a mayor has a benefit for allowing citizens believe it was the mayor that helped bring goods into the municipality. In this analysis, I show that the mayor's characteristics—and ability to deliver votes—still continues to affect the distribution of particularistic benefits. Where political parties are weak and all citizens are potential swing voters, a mayor who can use their position in the community to deliver voters is still important.

From my analysis, the support for the hypothesis that clientelist mayors have increased access to central government resources provides potential insight as to why we see such unequal distribution in access to public goods. Mayors who are best equipped to manipulate the system—either from their ability to manage local funds and, perhaps more notably, their ability to create reciprocal clientelist networks—are more likely to receive goods. This creates self-perpetuating networks since those mayors can continue to benefit while others struggle to bring extra funds into their municipalities.

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Appendices

A Validity Check Regressions and Graphs

Ordered Logit: Government Combats Corruption	
Municipal Clientelism	-0.879** (0.362)
AIC	11650.459
BIC	11704.585
Log Likelihood	-5816.230
Deviance	11632.459
Num. obs.	3023

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table A.1: To what extent does the government combat corruption?

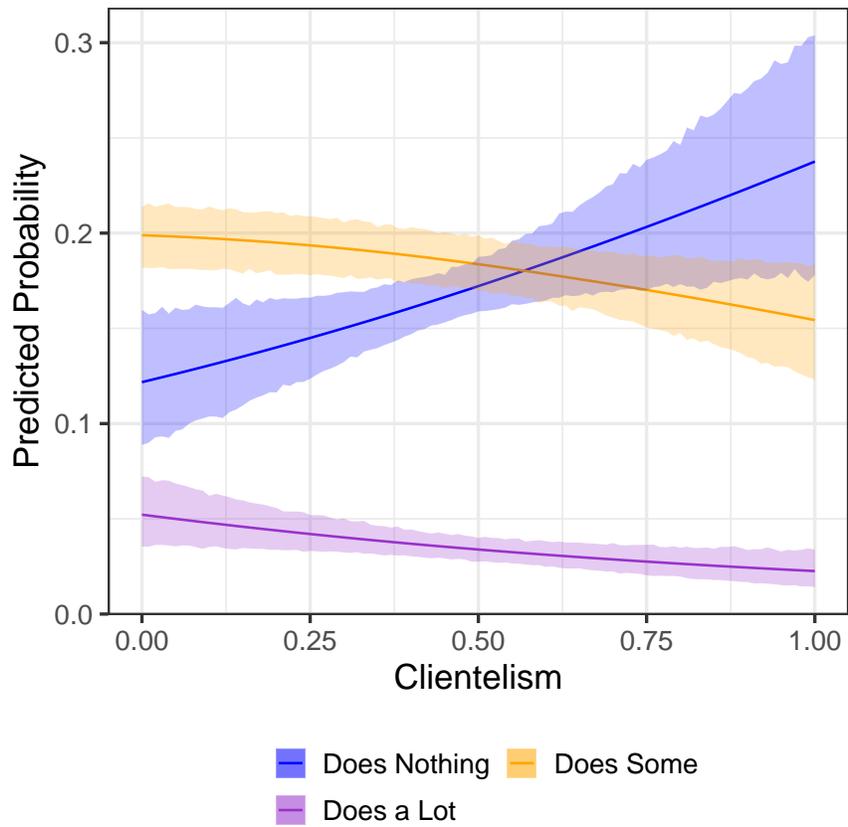


Figure A.1: Predicted Probability of Response to Question “To what extent does the government combat corruption?”

Ordered Logit: Corruption in Public Officials	
Municipal Clientelism	2.213*** (0.391)
AIC	7022.569
BIC	7058.653
Log Likelihood	-3505.285
Deviance	7010.569
Num. obs.	3023

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table A.2: How widespread is corruption in public officials?

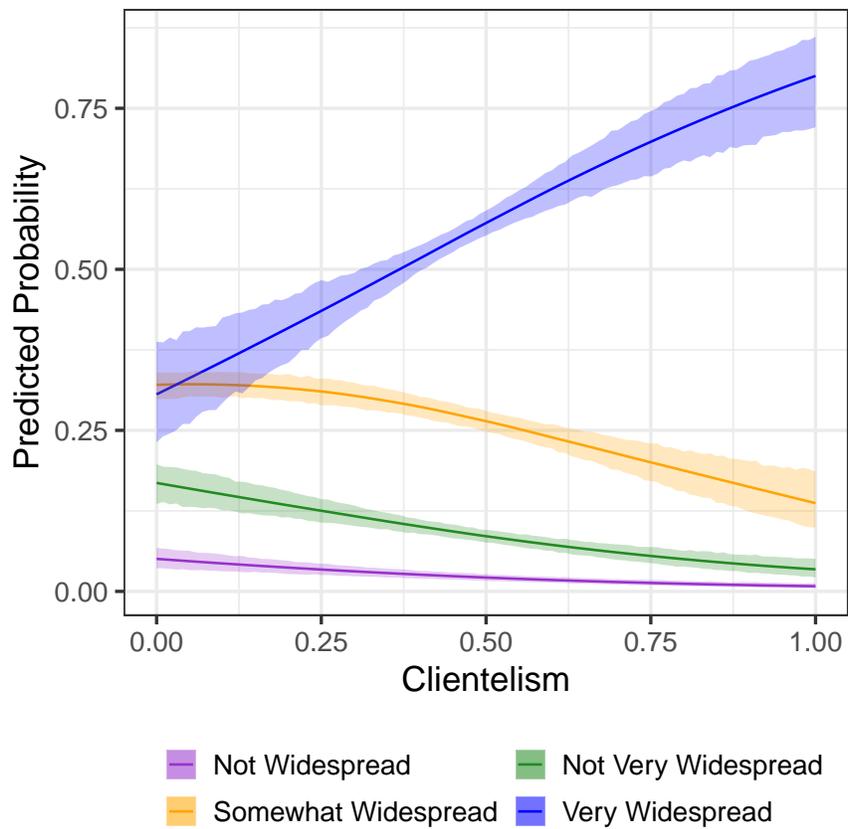


Figure A.2: Predicted Probability of Response to Question “How widespread is corruption?”

B Alternative Modeling Specifications: Number of Contracts

B.1 Count Models

	Poisson	Negative Binomial
Intercept	-20.765 (288.044)	-30.774 (42741.638)
Municipal Clientelism	2.584*** (0.487)	2.732*** (0.631)
Proportion valid SISBEN	-2.860*** (0.777)	-2.841*** (0.984)
Proportion Rural	-0.949*** (0.187)	-0.996*** (0.241)
Fiscal Performance Index	0.040*** (0.007)	0.041*** (0.009)
Open Government Index	-0.017*** (0.004)	-0.019*** (0.006)
Member of Presidents Party	0.115 (0.102)	0.091 (0.130)
Mayor Election Competitiveness	0.010*** (0.003)	0.010** (0.005)
2013	16.018 (288.043)	26.009 (42741.638)
2014	17.283 (288.043)	27.252 (42741.638)
2015	17.935 (288.043)	27.960 (42741.638)
AIC	2689.131	2531.411
BIC	2757.638	2606.146
Log Likelihood	-1333.565	-1253.705
Deviance	1873.899	1168.091
Num. obs.	3744	3744

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table B.1: Non Zero-Inflated Models

B.2 Zero-Inflated Negative Binomial

	Negative Binomial
Count Model: Intercept	-20.776 (475.201)
Municipal Clientelism	2.732*** (0.639)
Proportion valid SISBEN	-2.841*** (0.944)
Proportion Rural	-0.996*** (0.243)
Fiscal Performance Index	0.041*** (0.009)
Open Government Index	-0.019*** (0.006)
Member of President's Party	0.091 (0.130)
Mayor Election Competitiveness	0.010** (0.005)
2013	16.011 (475.201)
2014	17.254 (475.201)
2015	17.962 (475.201)
Log(θ)	-0.725*** (0.142)
Zero Model: Intercept	-11.685 (264.469)
AIC	2533.411
Log Likelihood	-1253.706
Num. obs.	3744

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table B.2: Negative Binomial Specifications

B.3 Zero-Inflated Models with Municipal Demographics in the Logit Component

	Zero-Inflated Poisson	Zero-Inflated Negative Binomial
Count Model: Intercept	-1.078*** (0.351)	-1.485*** (0.392)
Municipal Clientelism	2.628*** (0.569)	2.737*** (0.631)
Proportion valid SISBEN	-1.782** (0.829)	-2.013** (0.920)
Member of President's Party	0.080 (0.120)	0.098 (0.130)
Mayor Election Competitiveness	0.009** (0.004)	0.010** (0.005)
Zero Model:Intercept	20.251 (532.923)	19.905 (480.832)
Proportion Rural	1.059*** (0.335)	1.370*** (0.466)
Fiscal Performance Indicator	-0.060*** (0.012)	-0.073*** (0.016)
Open Government Index	0.030*** (0.008)	0.037*** (0.010)
2013	-16.283 (532.922)	-16.179 (480.831)
2014	-17.443 (532.922)	-17.485 (480.830)
2015	-18.339 (532.922)	-18.733 (480.831)
Log(<i>heta</i>)		0.228 (0.320)
AIC	2588.500	2566.332
Log Likelihood	-1282.250	-1270.166
Num. obs.	3744	3744

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table B.3: Zero-Inflated Models with Municipal Indicators

C Summary Statistics of All Variables

Variable	Minimum	Mean	Median	Standard Deviation	Maximum
Logged SGP per Capita	0.00	13.26	13.28	0.54	15.73
Logged Discretionary Royalty Transfers	0.00	5.74	6.55	2.91	12.50
Number of Contracted Projects	0.00	0.14	0.00	0.51	7.00
Value of Contracted Projects	14.29	21.51	21.63	1.70	25.56

Table C.1: Summary Statistics for all Dependent Variables

Variable	Minimum	Mean	Median	Standard Deviation	Maximum
Municipal Clientelism	0.158	0.363	0.347	0.089	0.662
Proportion Valid SISBEN	0.001	0.231	0.234	0.058	0.540
Proportion Rural	0.001	0.547	0.583	0.242	0.983
Fiscal Performance Index	18.250	68.600	68.450	7.776	91.750
Open Government Index	20.930	67.680	68.970	10.442	94.510
Member of Presidents Party	0.000	0.247	0.000	0.431	1.000
Mayor Election Competitiveness	0.030	14.210	11.090	12.062	85.760
Population	976	37859	13417	135654.2	2464322

Table C.2: Summary Statistics for all Independent Variables