Private-Sector Support for Programmatic Candidates: Evidence from a Senegalese Election*

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Research note

Abstract

Demand for clientelism in low-income countries distorts political incentives and constrains economic growth. Informal workers are seen as a historically strong constituency for clientelism because they rely on forbearance and other targeted benefits. Yet informal workers also constitute a significant electoral bloc with the potential to coordinate in support of programmatic policies that would serve them better in the long run. We examine whether—and how—demand for clientelism among informal workers can be attenuated. We implement an information experiment with firm owners ahead of Senegal's 2022 local elections, during which an upstart political faction campaigned on programmatic reform. We show that reminding informal workers of their coordination capacity reduces engagement with dominant clientelistic networks. Crucially, this shift does *not* translate into support for programmatic alternatives but instead into political disengagement. These findings suggest that demand for clientelism can be mitigated, but programmatic mobilization remains a challenge.

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1 Introduction

Proponents of development in the Global South have long sought a shift from the targeted provision of goods and services to the implementation of universalistic policy. Clientelism, the discretionary redistribution of goods in exchange for political support, can distort political incentives and deepen inequalities. In low-income countries, clientelist appeals tend to dominate programmatic ones (Kitschelt and Wilkinson 2007; Hicken 2011), especially among the powerful electoral bloc of business owners (Wank 1996). The lack of programmatic voting may be explained, in part, by the large number of firms in low-income countries that operate in the informal sector (Gottlieb 2024). Informal firms tend to under-value programmatic appeals, especially as their very existence is often contingent on clientelistic policies that overlook their illegality (Holland 2016).

But while some firms benefit from this type of targeting, many do not. Informal firms may be better off from the stability that predictable policy provides, especially via codified protection from the expropriation and illegal tax extraction that informal firms regularly face. Particularly as informal firms constitute the bulk of economic units in low-income countries (La Porta and Shleifer 2014), they possess a latent capacity to coordinate around programmatic policies that could improve their outcomes in the long run. Regardless of demand, however, there may not be adequate supply: few low-income democracies boast candidates that effectively campaign on programmatic promises instead of clientelistic ones.

In this research note, we leverage a unique moment in Senegal's political history to assess whether informal workers break away from the non-programmatic status quo when given the opportunity. We implemented an information experiment around Senegal's local elections in 2022, when a programmatic political coalition—mobilized from outside the *ancien regime* (Shefter 1977)—stood election against the traditionally clientelistic ruling party. To assess whether and how support for clientelism can be attenuated—and whether this translates into greater support for programmatic candidates—we implement a factorial survey experiment that: (1) primes the salience of firm owners' economic sector (formal or informal), (2) provides information about the benefits

of the formal sector, and (3) reminds firm owners of their considerable within-sector coordination capacity.

We first confirm the common perception that informal workers are generally less supportive of programmatic candidates, and also show that priming the salience of the informal sector pushes them even further toward the ruling party. While reminding informal workers of the benefit of formalizing on its own does not change their behavior, reminding them of their considerable size and thus their coordination capacity reduces their support for clientelistic candidates. Importantly, this shift does not translate into support for programmatic candidates: informal firm owners disengage from the political process rather than support programmatic candidates.

Our findings demonstrate that the informal sector's latent coordination capacity can potentially reduce dependence on non-programmatic or clientelistic candidates. Crucially, however, they also show that building a truly programmatic coalition requires more than simply activating their collective identity. A decline in informal firms' support for the ruling party does not necessarily mean they have been persuaded by programmatic appeals or have reallocated their votes to the programmatic challenger. Instead, the key behavioral margin may be participation itself. In this sense, information and sector-based coordination cues may operate through an "exit versus voice" logic, dampening clientelist alignment while simultaneously increasing abstention, uncertainty, or political disengagement. This research note thus identifies a new and fertile area for future research on clientelism to explore.

2 Theory

Elections in the Global South have long been characterized by entrenched clientelism. Clientelist candidates offer selective material incentives to particular groups in exchange for political support, and their campaigns often rely on charisma, personalized appeals, and targeted inducements (Stokes, Dunning and Nazareno 2013). Programmatic candidates, by contrast, offer policy platforms that are broad, impersonal, and rule-based, designed to apply to all citizens regardless of their partisan or personal loyalties (Kitschelt 2000).

Firm formality plays a critical role in moderating support for clientelistic versus programmatic candidates. Formal firms are more likely to seek codified, rule-based policies rather than rely on the discretionary behavior of political patrons (Skowronek 1982; Kuo 2018). This is because formalization ties firms to the regulatory state—through taxation, licensing, and legal institutions—creating incentives to support politicians who offer transparent and predictable governance. Rule-based governance is more amenable to long-term investment decisions compared to discretionary rule where outcomes rely on one's relationship to the party in power. In addition, firm productivity is higher where contracts are credible and where recourse exists to resolve disputes, compared to contexts where favorable judicial outcomes depend on political relationships (Bhandari 2022; Frye and Shleifer 1997). This leads to our first hypothesis:

Hypothesis 1. *Relative to the informal sector, the formal sector will be more likely to vote for a programmatic candidate.*

If this is the case, then formalization may shift political preferences by altering the relationship between firm owners and the state. But in many low-income countries, the informal economy dominates the formal one, and informal firm owners perceive little benefit from entering the formal sector. They often view the state as predatory or ineffective, and do not believe that registration will yield meaningful improvements in access to credit, infrastructure, or protection from economic harassment by informal tax collectors (La Porta and Shleifer 2014). As a result, many informal firms choose to remain outside the state's regulatory reach.

Information about benefits of formalization may thus change informal firm owners' political calculations. If informal firm owners come to believe that formal status offers tangible advantages, they may be more inclined to support candidates who promise broad, rule-based programs. Owners who expect to benefit from firm formalization will have a greater stake in programmatic platforms that expand and protect those benefits. Thus, when a candidate campaigns on universal rules that would insulate formal firms from arbitrary harassment or enforcement, we hypothesize that making the benefits of formalization known will increase informal business owners' support for programmatic candidates.

Hypothesis 2. *The informal sector will be more likely to vote for a programmatic candidate when they are made aware of the benefits of formalization.*

Formalization alone, however, may not be enough. Political transitions, especially away from clientelism, have historically required coordination from voters and from interest groups such as unions or business coalitions (Shefter 1977; Kuo 2018). While the act of voting is an individual activity (at least when ballots are secret), political shifts often depend on voters' beliefs about whether others will act similarly (Olson 1971). Voting for a programmatic candidate under a clientelistic status quo can thus pose a collective action problem: while a soon-to-be formal business owner may prefer a universalistic policy regime, they may only shift away from the clientelist candidate if they believe others will as well (Adida et al. 2020). In developing contexts, however, the informal sector is highly fragmented. Informal business owners may not naturally perceive themselves as part of a common sector with shared interests or meaningful political weight. Indeed, they are much less likely than members of the formal sector to see their fate as linked or to discuss shared economic problems—both facilitators of coordination (Gottlieb 2026). We thus consider whether priming coordination capacity, in addition to information about the benefits of formalization, impacts business owners' likelihood of supporting programmatic politics. Our expectation is not that information about sector size, on its own, necessarily increases confidence in collective action. Rather, when paired with a prime that makes respondents' sectoral status salient, such information may help informal firm owners view themselves as part of a broader and politically consequential constituency.

Hypothesis 3. *The informal sector will be more likely to vote for a programmatic candidate when they are made aware of the benefits of formalization and see themselves as a sufficiently large constituency.*[1]

Understanding the conditions under which firm owners shift their support to programmatic candidates is important for identifying pathways out of long-lasting clientelist equilibria that constrain incentives to formalize, invest, and grow.

[1] All hypotheses were pre-registered prior to data collection.

3 Context and research design

3.1 Background

While some programmatic opposition parties have emerged in Senegal's history around workers' rights and economic nationalism, their messages were limited in reach, only appealing to "a small segment of unionized urbanites and salaried professionals rather than the mass of the urban poor" (Resnick 2014, 87). The broader electorate, especially informal workers, has remained tied to parties and coalitions with strong clientelist machines.[2]

This pattern is notable given the sheer size and economic importance of Senegal's informal sector. Informal economic activity accounts for over 90% of employment and nearly half of national GDP, encompassing occupations from petty trade and food service to retail and light manufacturing (ANSD 2016).[3] Informality may induce divergent policy preferences given the distinct ways in which formal and informal actors interact with the state, for example, through different patterns of tax payment.[4] Yet despite their economic scale, informal actors have historically lacked formal political representation.[5] Their political engagement is often mediated through personalized ties with local politicians and intermediaries, and there are few institutional mechanisms through which their collective interests are channeled (Gottlieb 2024). Instead, they are integrated into patron-client networks and urban political machines, limiting their ability to push for broader policy reforms.

[2]For more detail on the Senegalese context, see Appendix A.

[3] Some informal firms, especially larger ones, strategically evade formal taxation; others would prefer to formalize to escape informal taxation, access public benefits, or bid on public contracts but fail to do so due to information and access constraints (Gottlieb 2024). Experimental evidence from Sri Lanka and observational evidence from Bolivia confirm that informal firms seek formalization for access to credit, legal protection, and reduced harassment by tax authorities, not solely to comply with tax obligations (De Mel, McKenzie and Woodruff 2013; McKenzie and Sakho 2010).

[4] Appendix M illustrates that the formal sector is more likely to pay state-collected taxes while the informal sector is more likely to pay informal taxes; local taxes are collected at similar rates. Local and informal taxes are much more likely to be accompanied by bribes or negotiation relative to state-collected taxes.

[5]While there does exist a union of informal businesses (UNACOIS) that was initially successful in representing the common interests of its members in the 1990s (Thioub, Diop and Boone 1998), its eventual fracturing and downfall underscore the difficulty of a small group of elite members credibly representing the broader masses of smaller firms whose interests often diverge substantially.

In this context, we view the rise of a new programmatic political coalition in the country as a unique opportunity to assess whether programmatic discourse can gain traction within a clientelist political landscape, especially among informal firm owners historically attracted to clientelist appeals.[6] Macky Sall, the incumbent president at the time of the project's implementation, had consolidated power through a presidency centered around clientelistic and populist strategies. This is not to say that Sall's presidency lacked programmatic appeal altogether, however. Like Senegalese executives before him, his rise to power was accompanied by policy-based optimism, including his economic plan for an "emerging Senegal" and promises of executive reform. Toward the end of his presidency, he also served as chair of the African Union and emphasized infrastructure-driven development. Despite these programmatic elements, however, Sall's presidency culminated in a constitutional crisis when he attempted to postpone the presidential election based on widely criticized justifications.[7] It was toward the end of his presidency that a largely programmatic opposition coalition began to gain mass appeal among broad segments of the urban and rural poor. This was the party of Ousmane Sonko, a former tax inspector who blew the whistle on government corruption in 2016 and was subsequently fired from his job by Sall. This experience gave Sonko credibility to build a political movement around a new vision of social justice and transparency (Monks 2019). In the 2019 presidential elections, Sonko campaigned against Sall on specific economic policies including moving away from the country's colonial era currency and reducing tax evasion and expropriation by foreign firms. While Sonko only won a majority of the vote in his home region, he won a respectable 20% of the vote in Dakar (relative to 16% nationally) and his prominence in Senegalese politics continued to rise.

[6] Our respondents are firm owners rather than workers. In the Senegalese context, this distinction is often less pronounced than in settings with larger firms, since most enterprises consist of a single proprietor. At the same time, the distinction remains conceptually important: workers in larger firms may hold different political preferences from owners, as firm owners can themselves act as brokers or otherwise benefit from clientelistic exchange. The findings should therefore be interpreted as applying to firm owners, not workers more generally.

[7] In a show of strength of the country's institutions, however, Senegal's Constitutional Council overturned Sall's decision.

His influence had crescendoed by the time of local elections in 2022, which thus presented an ideal opportunity to assess whether programmatic appeals might sway informal workers from their usual voting behavior. While Sonko ran for mayor of his home region's capital city of Ziguinchor, his coalition (*Yewwi Askan Wi*—"liberate the people" in Wolof) also ran a candidate, Barthélémy Dias, in Dakar. Sonko's coalition was seen as establishing credible programmatic linkages with voters due to his personal history and the ideological commitments of the party he founded. We substantiate this claim empirically by having survey enumerators provide a standardized definition of programmatism and then asking respondents to identify which coalition best embodied this linkage mechanism. Approximately 53% of respondents identified Sonko's coalition as programmatic compared to only 22% who did so for the incumbent president.[8] We further asked respondents how beneficial they perceived political clientelism to be. Consistent with our classification of Sonko as non-clientelistic, individuals who viewed clientelism as more beneficial were significantly less likely to support Sonko and significantly more likely to support the ruling coalition. Appendix L presents regression evidence confirming that each unit increase on a five-point scale measuring perceived benefits of clientelism is associated with a 5.9 percentage point increase in ruling-coalition support ($p < 0.01$) and corresponding decreases in support for Dias and Sonko.

3.2 Experimental design

We test our hypotheses using both descriptive analysis and causal inference based on a phone survey of business owners conducted approximately one week prior to Senegal's 2022 local elections. The sample consists of 1,071 private business owners, of whom 41% operate formal firms and 59% operate informal firms. Respondents were drawn from two samples originally recruited face-to-face in prior research conducted in Dakar (Bhandari 2023; Gottlieb 2024). These samples were drawn randomly and their status as formal or informal was recorded using the objective measure

[8]This perception is, of course, correlated with vote choice and should be interpreted with this in mind. Notably, however, nearly 20% of respondents who did not intend to vote for *Yewwi Askan Wi* (YAW) still identified it as the most programmatic coalition. Even 12% of supporters of Sall's coalition (BBY) identified YAW as the most programmatic, despite the pressures of social desirability that might have discouraged them from doing so. By contrast, less than 1% of YAW supporters identified BBY as the most programmatic.

	Control	**T2** *(benefits of formalization)*	**T2 + T3** *(benefits of formalization + coordination capacity prime)*
Control	Group 1 $\left(\frac{1}{6}\right)$	Group 2 $\left(\frac{1}{6}\right)$	Group 3 $\left(\frac{1}{6}\right)$
T1 *(sector salience)*	Group 4 $\left(\frac{1}{6}\right)$	Group 5 $\left(\frac{1}{6}\right)$	Group 6 $\left(\frac{1}{6}\right)$

Table 1: Factorial design treatment groups and assignment probabilities

of their business ID number. Additional details on these prior surveys and the resulting samples are provided in Appendix B.

We randomly assign three informational treatments prior to measuring outcomes. Treatment 1 (T1) aimed to increase the salience of respondents' sector (formal or informal) to causally test descriptive patterns associated with H1. Treatments 2 (T2) and 3 (T3) were designed to test H2 and H3, respectively. Treatments are summarized below, and the full scripts are provided in Appendix C.

T1: Increases the salience of the respondent's economic sector by describing the formal or informal way in which each sector pays taxes.

T2: Increases the perceived benefits of formalization by providing (largely new) information about the advantages of a formal tax scheme that is applied to small businesses when they formalize.[9]

T3: Increases perceptions of coordination capacity by priming the large size of the respondent's economic sector (formal or informal).

For efficiency, we employ a factorial design, with Control and T1 being crossed with Control, T2, and T2+T3 (see Table 1).[10] Enumerators read information scripts from tablets that automatically randomized assignment to one of the six treatment groups. Correct treatment implementation was validated via audio audits.

[9]There is arguably some conceptual overlap between T1 and T2. For a discussion of this, see Appendix C.

[10]See Appendix D for the detailed estimation strategy.

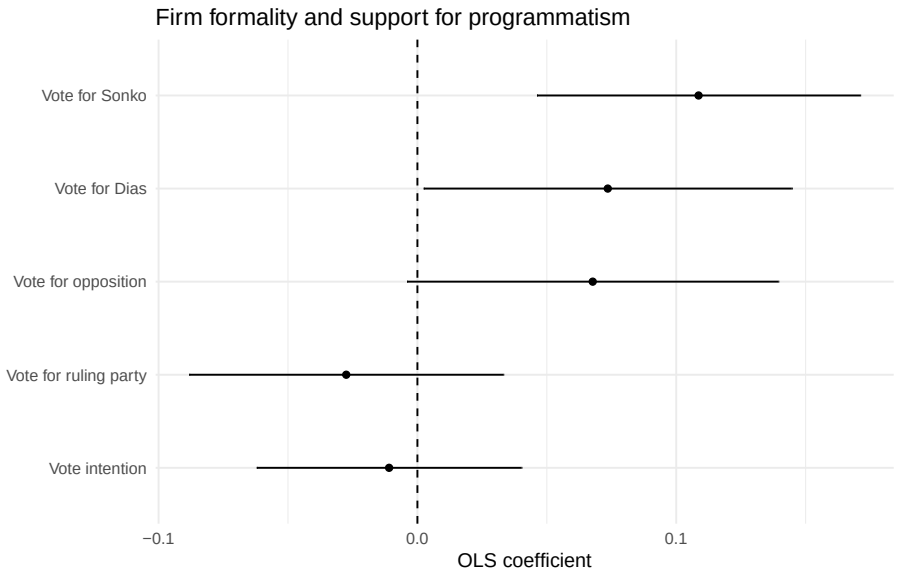
Our main outcomes of interest are intention to turn out, vote choice in the 2022 local elections, and intention to vote for Sonko in the 2024 presidential elections.[11] Informed by previous research on the social desirability bias inherent in asking survey respondents their intention to turn out to vote (Adida et al. 2019), we preface the turnout question with a normatively acceptable excuse for not turning out to vote. For vote choice, response options are each of the parties or coalitions running and their mayoral candidate. We then create a binary indicator for *Vote ruling* if the response is for the incumbent coalition (Benno Bokk Yaakaar) and for *Vote opposition* if the response is for an opposition coalition. We create the binary indicator *Vote Dias* if respondents say they will vote for the Yewwi Askan Wi coalition (because our sample of voters are in Dakar, they cannot vote directly for Sonko in these local elections). Appendix E presents summary statistics for each outcome variable. We interpret voting for the ruling party as a preference for a more clientelistic party as incumbents have a comparative advantage in using state resources, and there is a history of incumbents taking over the clientelistic networks of their predecessors in Senegal (Osei 2013). Of course, the ruling party and the Dias/Sonko movement differ in more ways than their entrenchment in clientelism. We are buoyed by respondents' answers to questions about programmatism and clientelism (described at the end of Section 3.1), and we lend further support to our interpretation in Section 4.

4 Results

We first approach Hypothesis 1 descriptively. The results presented in Figure 1 show that, relative to informal firms, firms in the formal sector were more likely to say they would vote for the programmatic candidates; without any kind of priming, formal firm owners were 7 percentage points more likely to say they will vote for Dias in the upcoming local elections and 10 percentage points more likely to say they will vote for Sonko in the 2024 presidential elections. These results

[11] At the time of the survey, Sonko was widely expected to be a presidential candidate in 2024. However, he was ultimately ineligible to run, so his close associate, Bassirou Diomaye Faye, became the coalition's candidate and was widely seen as Sonko's de facto stand-in.

Figure 1: Test for Hypothesis 1: Outcomes by firm formality status



Notes: Listed outcomes are regressed on a binary indicator for firm formality. Specifications estimated using OLS and include controls for education and business revenue.

are robust to controlling for two covariates that are highly correlated with formality and may also affect political preferences: education and business income.

For corroborating experimental evidence, we direct readers to Appendix G, which presents the full factorial specification for formal and informal sector respondents, respectively.[12] As evidence that the relationship between formality and programmatic support is not spurious, we show that experimentally priming informality (T1) among informal firms increased the likelihood that they vote for the less programmatic ruling party by almost 10 percentage points in the absence of T2 and T3 (see Appendix Table G8, model 2).

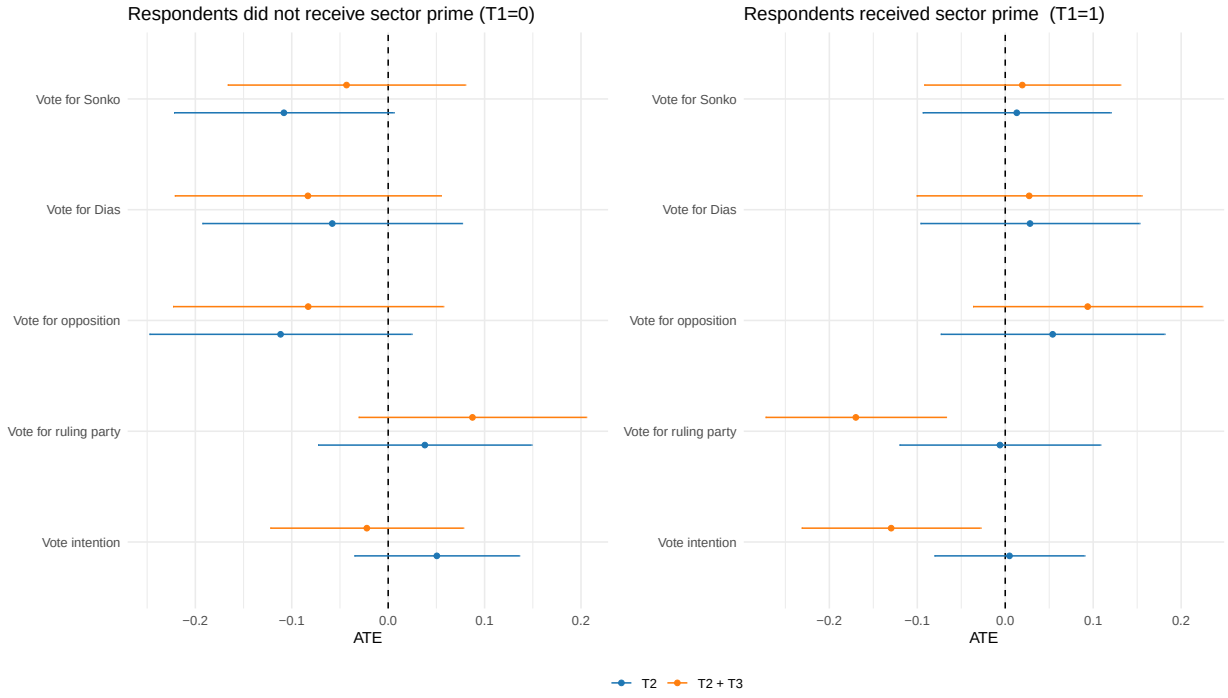
We next examine whether informal workers can be induced to support more programmatic candidates, testing Hypotheses 2 and 3 concerning the benefits of formalization and priming coordination capacity.[13] Appendix G.2 shows that providing information about the benefits of formal-

[12]With a factorial design, we could also have averaged over one dimension (e.g., control, T2, T3) while testing the effect of the other dimension (e.g., T1). This risks obscuring effects in the case of significant interactions between dimensions. As is clear from the appendix tables, there are significant interaction effects between the crossed dimensions of treatment (T1 and T2/T3).

[13]Appendix G.1 confirms that, as expected, treatments did not shift formal sector workers' support for clientelism or programmatism.

ization (T2), either alone or in combination with a prime for sector size (T3), did not generate the expected increase in support for programmatic candidates. If anything, these treatments reduced support for a programmatic candidate in the absence of T1 (columns 3-5 of Table G8). These unexpected effects of T2 and T3 disappear, however, when respondents are first primed about their sector (T1), as illustrated in Figure 2. Thus, we find that such information alone does not translate into increased electoral support for programmatic candidates.

Figure 2: Tests for Hypotheses 2 and 3: Coordination matters



Notes: Experimental results among informal firms. The figure depicts the marginal effects of each treatment dummy among respondents who did not receive the informality prime (left panel) and those who received it (right panel). "T2" indicates receipt of information about the benefits of formalization, and "T2 + T3" indicates additional receipt of information priming coordination capacity. Appendix Table G8 presents the results in table form.

More in line with our expectations, combining information about the benefits of formalization with a prime about coordination capacity (T2 + T3) significantly reduced support for the clientelist ruling party among informal sector respondents who also received the sector salience prime. This result is depicted in orange in the right panel of Figure 2 (coefficients and standard errors

reported in Appendix Table G8, column 2). Notably, the decline in support for the ruling party was *not* offset by increased support for a programmatic alternative like Dias or Sonko. Instead, informal workers split between abstaining from voting or supporting other opposition parties. When reminded about their informal status, the benefits of formalization, and their collective size, informal workers shifted their support to opposition parties (by approximately 10 percentage points) or disengaged from voting altogether (by approximately 13 percentage points). In short, providing informal sector voters with informational tools to think of themselves as a programmatic constituency reduces mobilization around the less programmatic incumbent, but does not necessarily increase coordination around a programmatic alternative.

One concern with our interpretation of these findings is that the ruling party and Dias/Sonko coalition differ on dimensions beyond their commitment to programmatism or clientelism. We provide some support for our interpretation by investigating a relevant mechanism implied by our theory. We hypothesized that our treatments could push informal sector members to vote for a more programmatic candidate if they saw themselves as an organized economic interest that could extract programmatic benefits. Consistent with this logic, we might expect this effect to be stronger among members of our informal sector sample who already belong to an economic association. When we interact an indicator for associational membership with the two treatment arms encouraging programmatic voting (T2 and T3), we observe a strong and significant effect of treatment on voting for Sonko among association members (see Appendix Table I10).

5 Conclusion

In sum, we find both descriptive and experimental support for the claim that firm informality decreases support for more programmatic candidates. By contrast, we find limited evidence that informal sector members can be induced to support programmatic candidates. However, we do find that invoking sector size matters in important and interesting ways. When combined with a reminder about one's informal status, these reminders of potential coordination capacity can depress both vote intention and support for the clientelistic—or at least less programmatic—ruling

party. This may be attributable to the fact that priming the status of informal economic actors reminds them of the inefficiencies, corruption, and lack of transparency in their interactions with local government. We see this exploration of mechanisms as a fruitful avenue for future research.

Competing interests

Competing interests: The authors declare none.

References

Adida, Claire, Jessica Gottlieb, Eric Kramon and Gwyneth McClendon. 2019. "Response Bias in Survey Measures of Voter Behavior: Implications for Measurement and Inference." *Journal of Experimental Political Science* 6(3):192–198.

Adida, Claire, Jessica Gottlieb, Eric Kramon and Gwyneth McClendon. 2020. "When Does Information Influence Voters? The Joint Importance of Salience and Coordination." *Comparative Political Studies* 53(6):851–891.

ANSD. 2016. *Synthèse des Resultats du Projet de Renovation des Comptes Nationaux*. Dakar: Agence Nationale de la Statistique et de la Démographie (ANSD), Ministère de l'Economie des Finances, et du Plan, République du Sénégal.

Bhandari, Abhit. 2022. "Political Determinants of Economic Exchange: Evidence from a Business Experiment in Senegal." *American Journal of Political Science* 66(4):835–852.

Bhandari, Abhit. 2023. "Social, Formal, and Political Determinants of Trade Under Weak Rule of Law: Experimental Evidence from Senegalese Firms." *Comparative Political Studies* 56(2):163–192.

De Mel, Suresh, David McKenzie and Christopher Woodruff. 2013. "The Demand for, and Consequences of, Formalization among Informal Firms in Sri Lanka." *American Economic Review* 103(6):2157–2186.

Frye, Timothy and Andrei Shleifer. 1997. "The Invisible Hand and the Grabbing Hand." *American Economic Review* 87(2):354–358.

Gottlieb, Jessica. 2024. "How economic informality constrains demand for programmatic policy." *American Journal of Political Science* 68(1):271–288.

Gottlieb, Jessica. 2026. *Keeping the State Weak: Economic Informality and the Weak-State Trap in Sub- Saharan Africa*. Cambridge University Press.

Hicken, Allen. 2011. "Clientelism." *Annual Review of Political Science* 14:289–310.

Holland, Alisha C. 2016. "Forbearance." *American political science review* 110(2):232–246.

Kitschelt, Herbert. 2000. "Linkages between citizens and politicians in democratic polities." *Comparative political studies* 33(6-7):845–879.

Kitschelt, Herbert and Steven I Wilkinson. 2007. *Patrons, clients and policies: Patterns of democratic accountability and political competition*. Cambridge University Press.

Kuo, Didi. 2018. *Clientelism, capitalism, and democracy: The rise of programmatic politics in the United States and Britain*. Cambridge: Cambridge University Press.

La Porta, Rafael and Andrei Shleifer. 2014. "Informality and development." *Journal of economic perspectives* 28(3):109–126.

McKenzie, David and Yaye Seynabou Sakho. 2010. "Does It Pay Firms to Register for Taxes? The Impact of Formality on Firm Profitability." *Journal of Development Economics* 91(1):95–107.

Monks, Kieron. 2019. "Senegal voters head to polls as presidential challenger hopes to cause upset." *CNN* .
URL: *https://www.cnn.com/2019/02/22/africa/senegal-election-sonko/index.html*

Olson, Mancur. 1971. *The Logic of Collective Action: Public Goods and the Theory of Groups, with a new preface and appendix*. Vol. 124 Harvard University Press.

Osei, Anja. 2013. "Party-voter linkage in Senegal: the rise and fall of Abdoulaye Wade and the Parti Démocratique Sénégalais." *Journal of African Elections* 12(1):84–108.

Resnick, Danielle. 2014. *Urban poverty and party populism in African democracies*. Cambridge University Press.

Shefter, Martin. 1977. "Party and patronage: Germany, england, and italy." *Politics & Society* 7(4):403–451.

Skowronek, Stephen. 1982. *Building a new American state: The expansion of national administrative capacities, 1877-1920*. Cambridge University Press.

Stokes, Susan C, Thad Dunning and Marcelo Nazareno. 2013. *Brokers, voters, and clientelism: The puzzle of distributive politics*. Cambridge University Press.

Thioub, Ibrahima, Momar-Coumba Diop and Catherine Boone. 1998. "Economic liberalization in Senegal: Shifting politics of indigenous business interests." *African Studies Review* 41(2):63–90.

Wank, David L. 1996. "The institutional process of market clientelism: Guanxi and private business in a South China city." *The China Quarterly* 147:820–838.

Appendix

A Additional details on Senegalese context

Senegal's electoral system has long been recognized as clientelistic (Kitschelt 2013), and there is a large literature describing its clientelistic broker system (O'Brien 1971; Boone 2003; Beck 2008; Koter 2013). Multiparty, free, and fair elections have existed in Senegal since 2000, with the two presidential candidates elected since then winning on the basis of clientelistic and charismatic appeals (Resnick 2013).

Both Sonko and Dias won their races, demonstrating the viability of programmatic platforms in Senegal's competitive urban centers. This shift culminated two years later when Sonko's coalition won the presidential election with an outright majority of 54%, a clear mandate in Senegal's pluralistic party system. Programmatism was not merely a campaign rhetorical tactic: since taking office, President Bassirou Diomaye Faye and Prime Minister Sonko have implemented several of the policy reforms they campaigned on, including an audit of public finances (which revealed a poorer than expected economic outlook) and comprehensive audits of gas and mining contracts.

B Sample information

The sample comes from two completed surveys. The first is from a survey conducted in Greater Dakar in 2017 on political attitudes and experiences of taxation (*citation redacted for anonymity*). A randomized sampling method targeted small, street-level business owners who largely tend to be informal[14] in 13 of Dakar's 43 urban communes that boast a high concentration of informal sector businesses. Participants include people selling wares and providing services such as tailors, carpenters, metalworkers and hairdressers. Increasing comparability with the formal sector sample, only businesses operating inside a physical storefront were recruited, i.e., ambulatory vendors and those operating stalls in open-air markets are excluded. The second sample was originally surveyed in 2018 and targeted firms in both the formal and informal sectors (*citation redacted for anonymity*). Each district of Dakar was subdivided into zones, and enumerators followed a pre-determined sampling step that varied by the size of each zone to reduce the risk of spillovers.

We define a firm as formal if they were able to provide the enumerator from the original in-person survey with their NINEA[15]—a national identification number received upon registering a business or association with the state. The transaction costs for acquiring a NINEA are quite low. Processing typically takes a few days and requires a written request, a photocopy of one's national ID card, a photocopy of the rental contract or property title where business is conducted, and 1000 FCFA (less than 2 USD). However, the vast majority of business in Senegal is comprised of small, informal firms or self-employed individuals. The national statistics agency reported that among the 407,000 economic units identified in the most recent census, 97% are informal (ANSD 2016).

C Experimental Design

The following text (translated from French) was used for each treatment:

T1 (sector salience): "The informal sector often pays taxes but irregularly to third parties. In other words, the tax collector may accept money from the taxpayer without giving them any receipt

[14] 96% of this sample was unable to provide a NINEA or evidence of business registration.

[15] *Numéro d'identification national des entreprises et des associations*.

for the payment of tax on the one hand, and on the other hand, the tax collector may reduce the taxable amount to the taxpayer in return for a commission paid to them for the service rendered. It is the collector who decides the amount to be paid, which is often negotiable, and double taxation is common due to the lack of receipts for payment. In contrast, the formal sector pays taxes regularly on the basis of a pre-determined amount according to their income brackets, directly to the government rather than to intermediaries."

T2 (formalization benefits): "There are existing policies that give small businesses the opportunity to formalize easily by obtaining a NINEA and paying a light and regular tax. This Single Global Contribution (CGU) is paid by small formal businesses according to their income bracket. For example, someone whose turnover is less than 600,000 CFA per year will only pay 30,000 CFA in tax. This policy could be beneficial for small businesses because they could better predict, on the one hand, the amount of taxes due, while benefiting from a possibility of reducing the amount to be paid compared to what they currently pay, and on the other hand, they could make claims in the event of surcharge. Although this policy exists and is beneficial to small businesses, the current government does not promote it and does not help small businesses benefit from it."

T3 (coordination capacity): *Formal firms*: "You are part of the formal sector which constitutes an important economic sector in Dakar. 25% of the adult population is employed in the formal sector." *Informal firms*: "You are part of the informal sector which constitutes the largest economic sector in Dakar. There is more than one informal business for every two households. This means that your interest group has enormous power thanks to its majority size."

There is some conceptual overlap in the information conveyed by treatments T1 and T2. T1, in an effort to make the lived experiences of the informal and formal sectors salient, provides information on how firm owners pay tax differently. On the one hand, this may prompt informal business owners to view formalization as beneficial, e.g., as a way to reduce irregular interactions with tax officials or to limit exposure to bribery. On the other hand, this may instead prompt informal firm owners to view formalization as detrimental because T1 also underscores the flexibility and sporadic nature of tax payments available in the informal sector. As such, we expect that T2 is at least more effective at priming the benefits of formalization. In a context where formalization rates are low, we expect that T1's highlighting of the contrasting experiences between formal and informal sectors should instead be more effective at reinforcing the divide between sectors than implicitly encouraging respondents to consider the potential benefits of formalization.

D Estimation

To test the effect of treatment on each of these outcomes, Y_k, we estimate a fully interacted OLS regression that allows us to recover the effect of each combination of treatments relative to the baseline Control group that received no information treatment. The equation takes the following form:

$$Y_{ki} = \alpha + \beta_1\, T1_i + \beta_2\, T2only_i + \beta_3\, T3_i + \beta_4\, T1_i \times T2only_i + \beta_5\, T1_i \times T3_i + \varepsilon_i$$

where $T1$ indicates the experimental group assigned to the sector salience condition, $T2only$ indicates the group that receives the information about the benefits of the formal tax scheme applied to

small business, and $T3$ indicates the group that receives T2 plus the informational prime about the sector's size.

Because the language of the third treatment is distinct for the formal and informal samples and because our hypotheses are conditional on sector, we estimate the regression equation separately for each of the informal and formal sector samples. Because of the interaction terms owing to the factorial design, this estimation on subsamples also avoids including triple interaction terms in the estimating equation.

E Summary Statistics

As we see in the table below, over 85% of our sample subjects reported they would participate in the upcoming local elections. Specifically, 22% said they would vote for the incumbent candidate, while 54% intended to vote for any opposition coalition. Approximately 42% indicated a preference for Dias, the candidate representing Sonko's programmatic coalition in Dakar. Additionally, respondents on average reported a 52% likelihood of voting for the programmatic candidate Ousmane Sonko in the upcoming presidential elections.

Table E1: Summary statistics of outcome variables

Variable	Mean	Sd	Min	Max
Vote Sonko	0.527	0.433	0	1
Vote Dias	0.424	0.494	0	1
Vote opposition	0.544	0.498	0	1
Vote ruling	0.224	0.417	0	1
Vote intention	0.856	0.349	0	1

F Average treatment effects

In this section, we present the average treatment effects. Note that T1 and T2 appear to have countervailing effects on the outcomes of interest, and by presenting the crossed results from our factorial design, we risk obscuring the effects of each treatment on their own without controlling for their joint impact—the approach we take in the main body. Without these interactions, the ATEs on their own are difficult to interpret.

Table F2: Average treatment effects

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Sector salience (T1)	−0.022	−0.010	0.020	0.015	0.012
	(0.021)	(0.025)	(0.030)	(0.026)	(0.031)
Formalization benefits (T2)	0.024	0.022	−0.005	−0.040	−0.009
	(0.026)	(0.031)	(0.036)	(0.032)	(0.037)
Sector size (T2 x T3)	−0.021	−0.041	−0.020	−0.025	0.012
	(0.026)	(0.032)	(0.037)	(0.033)	(0.038)
Constant	0.866***	0.235***	0.421***	0.541***	0.537***
	(0.021)	(0.026)	(0.030)	(0.027)	(0.031)
Observations	1,071	1,071	1,071	1,071	1,071
R^2	0.004	0.004	0.001	0.002	0.0004
Note:					*p<0.1; **p<0.05; ***p<0.01

Table F3: Average treatment effects of sector salience

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Sector salience (T1)	−0.044	−0.001	0.004	0.007	−0.004
	(0.027)	(0.033)	(0.039)	(0.034)	(0.039)
Formal sector	−0.014	0.005	0.046	0.084**	0.036
	(0.031)	(0.037)	(0.044)	(0.039)	(0.045)
T1 x Formal	0.058	−0.024	0.048	0.032	0.049
	(0.044)	(0.052)	(0.062)	(0.054)	(0.062)
Constant	0.874***	0.227***	0.395***	0.485***	0.523***
	(0.020)	(0.024)	(0.028)	(0.025)	(0.029)
Observations	1,071	1,071	1,071	1,071	1,071
R^2	0.003	0.0004	0.006	0.013	0.004
Note:					*p<0.1; **p<0.05; ***p<0.01

Table F4: Average treatment effects of formalization benefits (if subjects only received T2 and not T3, as per the middle column of treatment chart)

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Formalization benefits (T2)	0.064**	0.037	−0.0002	−0.039	−0.028
	(0.029)	(0.034)	(0.041)	(0.035)	(0.041)
Formal sector	0.044	−0.010	0.065*	0.089***	0.048
	(0.027)	(0.032)	(0.038)	(0.033)	(0.039)
T2 x Formal	−0.077*	0.011	0.014	0.030	0.038
	(0.046)	(0.055)	(0.065)	(0.057)	(0.066)
Constant	0.828***	0.214***	0.397***	0.502***	0.531***
	(0.017)	(0.020)	(0.024)	(0.021)	(0.024)
Observations	1,071	1,071	1,071	1,071	1,071
R^2	0.005	0.002	0.005	0.014	0.004
Note:					*p<0.1; **p<0.05; ***p<0.01

Table F5: Average treatment effects of formalization benefits (as per the middle and right columns of the treatment chart)

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Formalization benefits (T2)	−0.024	−0.017	−0.017	−0.027	−0.006
	(0.029)	(0.034)	(0.041)	(0.035)	(0.041)
Formal sector	−0.027	−0.021	0.060	0.109**	0.049
	(0.037)	(0.045)	(0.053)	(0.046)	(0.053)
T2 x Formal	0.067	0.022	0.014	−0.015	0.018
	(0.046)	(0.055)	(0.065)	(0.057)	(0.066)
Constant	0.865***	0.238***	0.408***	0.506***	0.525***
	(0.023)	(0.028)	(0.033)	(0.029)	(0.033)
Observations	1,071	1,071	1,071	1,071	1,071
R^2	0.003	0.0003	0.005	0.014	0.004
Note:					*p<0.1; **p<0.05; ***p<0.01

Table F6: Average treatment effects of sector size

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Sector size (T2 + T3)	−0.093***	−0.057	−0.018	0.013	0.024
	(0.029)	(0.035)	(0.042)	(0.036)	(0.042)
Formal sector	−0.031	−0.010	0.070*	0.114***	0.067*
	(0.026)	(0.032)	(0.037)	(0.033)	(0.038)
(T2 + T3) x Formal	0.151***	0.012	0.001	−0.047	−0.021
	(0.047)	(0.056)	(0.067)	(0.058)	(0.067)
Constant	0.879***	0.244***	0.402***	0.485***	0.513***
	(0.016)	(0.020)	(0.023)	(0.020)	(0.023)
Observations	1,071	1,071	1,071	1,071	1,071
R^2	0.012	0.003	0.005	0.013	0.004
Note:					*p<0.1; **p<0.05; ***p<0.01

G Treatment effects among formal and informal firms

G.1 Treatment effects among formal firms

Table G7: Experimental results among formal firms

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Sector salience (T1)	0.005	−0.005	0.062	0.088	0.052
	(0.057)	(0.070)	(0.084)	(0.073)	(0.083)
Formalization benefits (T2)	−0.006	0.045	0.034	−0.013	0.035
	(0.056)	(0.069)	(0.083)	(0.073)	(0.082)
Sector size (T2 + T3)	0.084	−0.007	−0.029	0.003	−0.002
	(0.057)	(0.071)	(0.085)	(0.074)	(0.084)
Sector salience (T1) x Formalization benefits (T2)	0.053	−0.020	−0.055	−0.042	−0.044
	(0.080)	(0.098)	(0.119)	(0.103)	(0.117)
Sector salience (T1) x Sector size (T2 + T3)	−0.031	−0.041	0.029	−0.110	0.024
	(0.082)	(0.100)	(0.121)	(0.105)	(0.120)
Constant	0.836***	0.219***	0.438***	0.572***	0.548***
	(0.040)	(0.049)	(0.059)	(0.051)	(0.058)
Observations	418	418	418	418	418
R^2	0.010	0.005	0.004	0.007	0.003
Note:					*p<0.1; **p<0.05; ***p<0.01

G.2 Treatment effects among informal firms

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Sector salience (T1)	0.005	0.095*	−0.061	−0.055	−0.117*
	(0.047)	(0.056)	(0.066)	(0.057)	(0.067)
Formalization benefits (T2)	0.050	0.038	−0.058	−0.108*	−0.112
	(0.049)	(0.058)	(0.068)	(0.059)	(0.069)
Sector size (T2 + T3)	−0.022	0.087	−0.083	−0.043	−0.083
	(0.050)	(0.059)	(0.070)	(0.061)	(0.071)
Sector salience (T1) x Formalization benefits (T2)	−0.046	−0.044	0.086	0.121	0.166*
	(0.067)	(0.079)	(0.093)	(0.081)	(0.095)
Sector salience (T1) x Sector size (T2 + T3)	−0.108	−0.257***	0.111	0.063	0.177*
	(0.069)	(0.081)	(0.095)	(0.083)	(0.097)
Constant	0.863***	0.186***	0.441***	0.537***	0.588***
	(0.035)	(0.041)	(0.049)	(0.042)	(0.050)
Observations	653	653	653	653	653
R^2	0.023	0.021	0.003	0.005	0.007
Note:					*p<0.1; **p<0.05; ***p<0.01

Table G8: Experimental results among informal firms

H Formal and informal firms combined specifications

Table H9: Heterogeneous treatment effects by firm sector (combined specification)

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Sector salience (T1)	0.005	0.095*	−0.061	−0.055	−0.117*
	(0.047)	(0.056)	(0.067)	(0.058)	(0.067)
Formalization benefits (T2)	0.050	0.038	−0.058	−0.108*	−0.112
	(0.048)	(0.058)	(0.068)	(0.060)	(0.069)
Formal sector	−0.027	0.033	−0.003	0.036	−0.040
	(0.053)	(0.064)	(0.076)	(0.066)	(0.076)
Sector size (T2 + T3)	−0.022	0.087	−0.083	−0.043	−0.083
	(0.050)	(0.059)	(0.071)	(0.061)	(0.071)
Sector salience (T1) x Formalization benefits (T2)	−0.046	−0.044	0.086	0.121	0.166*
	(0.066)	(0.079)	(0.094)	(0.081)	(0.094)
Sector salience (T1) x Formal sector	0.0002	−0.100	0.123	0.143	0.169
	(0.075)	(0.089)	(0.106)	(0.092)	(0.107)
Formalization benefits (T2) x Formal sector	−0.057	0.007	0.092	0.095	0.147
	(0.075)	(0.090)	(0.107)	(0.093)	(0.108)
Sector salience (T1) x Sector size (T2 + T3)	−0.108	−0.257***	0.111	0.063	0.177*
	(0.068)	(0.081)	(0.096)	(0.084)	(0.097)
Sector size (T2 + T3) x Formal sector	0.106	−0.094	0.054	0.046	0.080
	(0.077)	(0.092)	(0.110)	(0.096)	(0.111)
Sector salience (T1) x Formalization benefits (T2) x Formal sector	0.098	0.024	−0.141	−0.163	−0.209
	(0.105)	(0.126)	(0.150)	(0.130)	(0.151)
Sector salience (T1) x Sector size (T2 + T3) x Formal sector	0.076	0.217*	−0.081	−0.173	−0.153
	(0.108)	(0.129)	(0.153)	(0.134)	(0.155)
Constant	0.863***	0.186***	0.441***	0.537***	0.588***
	(0.034)	(0.041)	(0.049)	(0.043)	(0.049)
Observations	1,071	1,071	1,071	1,071	1,071
R^2	0.019	0.015	0.008	0.019	0.009
Note:					*p<0.1; **p<0.05; ***p<0.01

I Heterogeneous treatment effects by association membership

Table I10: Heterogeneous effects by association membership

	Dependent variable:				
	Vote intention	Vote ruling	Vote opposition	Vote Dias	Vote Sonko
	(1)	(2)	(3)	(4)	(5)
Association member	0.035	0.326**	−0.198	−0.094	−0.437***
	(0.123)	(0.145)	(0.171)	(0.167)	(0.144)
Formalization benefits (T2)	0.038	0.024	−0.037	−0.042	−0.063
	(0.037)	(0.044)	(0.052)	(0.051)	(0.044)
Sector size (T2 + T3)	−0.079**	−0.030	−0.022	−0.076	−0.054
	(0.038)	(0.045)	(0.053)	(0.051)	(0.045)
Association member×Formalization benefits (T2)	−0.104	−0.226	0.174	0.121	0.309*
	(0.154)	(0.180)	(0.213)	(0.208)	(0.180)
Association member×Sector size (T2 + T3)	−0.032	−0.303	0.134	0.187	0.531***
	(0.175)	(0.205)	(0.242)	(0.236)	(0.205)
Constant	0.854***	0.229***	0.531***	0.427***	0.537***
	(0.026)	(0.031)	(0.036)	(0.035)	(0.031)
Observations	580	580	580	580	580
R^2	0.017	0.014	0.003	0.004	0.021
Note:					*p<0.1; **p<0.05; ***p<0.01

J Alternate coding scheme for T2 (benefits of formalization)

In the following tables, the second treatment arm, which provides information about the benefits of formalization, is coded as 1 if any amount of the treatment was present (which is true for the middle and right columns in our factorial design presented in Table 1).

Table J11: Formal firms (alternative coding for T2)

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Sector salience (T1)	0.005	−0.005	0.062	0.088	0.052
	(0.057)	(0.070)	(0.084)	(0.073)	(0.083)
Formalization benefits (T2)	−0.006	0.045	0.034	−0.013	0.035
	(0.056)	(0.069)	(0.083)	(0.073)	(0.082)
Sector size (T2 + T3)	0.091	−0.052	−0.063	0.016	−0.038
	(0.058)	(0.071)	(0.085)	(0.074)	(0.085)
Sector salience (T1) x Formalization benefits (T2)	0.053	−0.020	−0.055	−0.042	−0.044
	(0.080)	(0.098)	(0.119)	(0.103)	(0.117)
Sector salience (T1) x Sector size (T2 + T3)	−0.084	−0.021	0.084	−0.068	0.068
	(0.082)	(0.100)	(0.121)	(0.105)	(0.120)
Constant	0.836***	0.219***	0.438***	0.572***	0.548***
	(0.040)	(0.049)	(0.059)	(0.051)	(0.058)
Observations	418	418	418	418	418
R^2	0.010	0.005	0.004	0.007	0.003
Note:					*p<0.1; **p<0.05; ***p<0.01

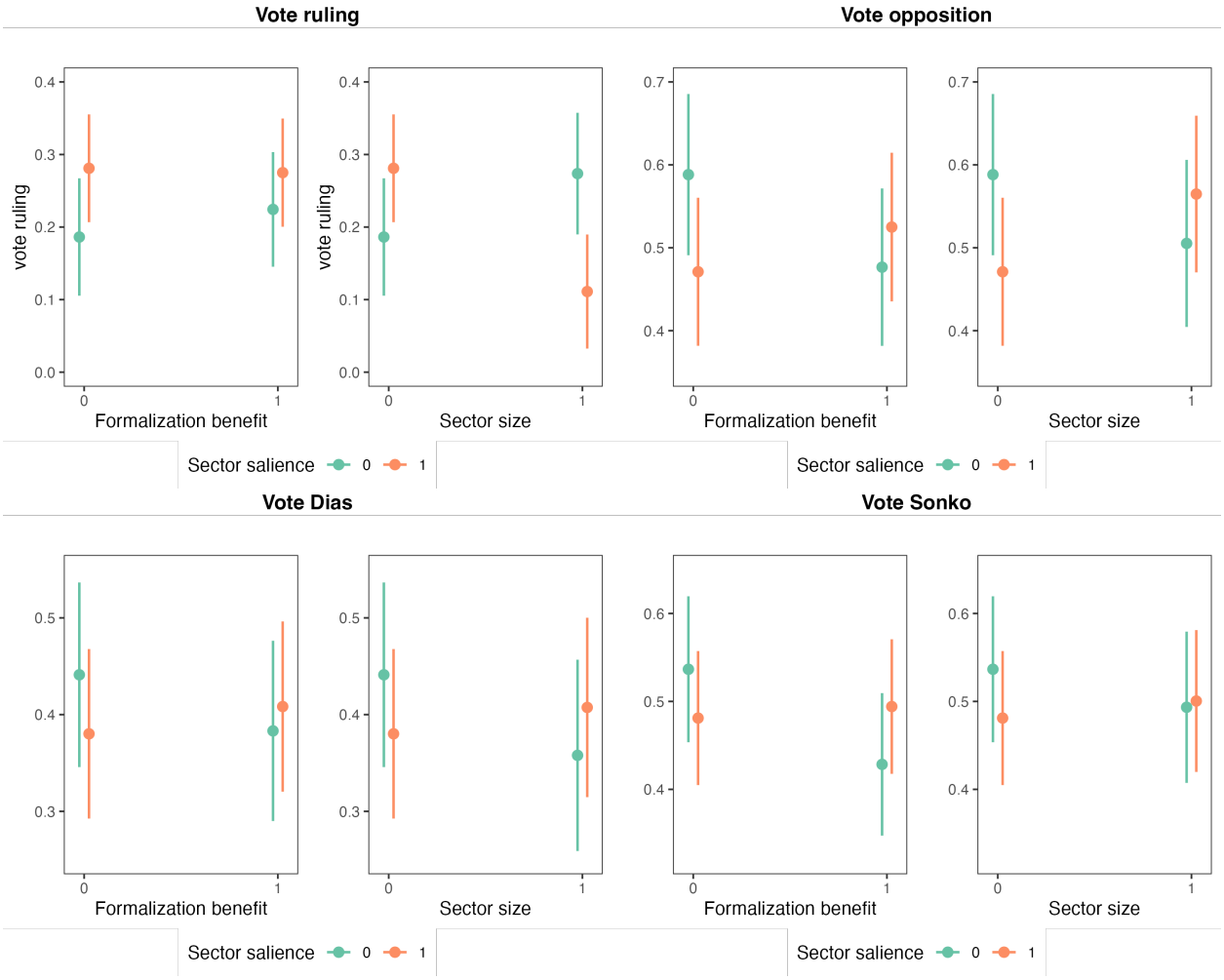
Table J12: Informal firms (alternative coding for T2)

	Dependent variable:				
	Vote intention	Vote ruling	Vote Dias	Vote Sonko	Vote opposition
	(1)	(2)	(3)	(4)	(5)
Sector salience (T1)	0.005	0.095*	−0.061	−0.055	−0.117*
	(0.047)	(0.056)	(0.066)	(0.057)	(0.067)
Formalization benefits (T2)	0.050	0.038	−0.058	−0.108*	−0.112
	(0.049)	(0.058)	(0.068)	(0.059)	(0.069)
Sector size (T2 + T3)	−0.073	0.049	−0.025	0.065	0.029
	(0.050)	(0.059)	(0.069)	(0.060)	(0.070)
Sector salience (T1) x Formalization benefits (T2)	−0.046	−0.044	0.086	0.121	0.166*
	(0.067)	(0.079)	(0.093)	(0.081)	(0.095)
Sector salience (T1) x Sector size (T2 + T3)	−0.062	−0.213***	0.024	−0.059	0.011
	(0.068)	(0.081)	(0.095)	(0.083)	(0.097)
Constant	0.863***	0.186***	0.441***	0.537***	0.588***
	(0.035)	(0.041)	(0.049)	(0.042)	(0.050)
Observations	653	653	653	653	653
R^2	0.023	0.021	0.003	0.005	0.007
Note:					*p<0.1; **p<0.05; ***p<0.01

K Predicted probabilities

Figure K1 illustrates the predicted probabilities of our turnout intention and vote choice outcomes conditional on treatment assignment among informal firms. The estimates in the figure are based on the regression results displayed in Table G8. The sector salience treatment and sector size prime are responsible for the biggest experimental effects in our design. Additionally, we see how the interaction between the sector salience treatment and the sector size prime negatively affects turnout intentions.

Figure K1: Predicted probabilities of turnout and vote choice among informal firms



L Clientelism attitudes and vote choice

To address the concern that ruling-party supporters may have been motivated by programmatic rather than clientelistic considerations, we examine whether attitudes toward clientelism predict vote choice. We estimate three OLS models with vote for the ruling coalition, vote for Dias, and vote for Sonko as dependent variables. The independent variables are perceived benefits of

clientelism (measured on a 1–5 scale), a binary indicator for family connections to the state, and a binary indicator for board membership with a politician; we estimate each specification with and without controls for education and business revenue.

Each unit increase on the clientelism scale is associated with a 5.9 percentage point increase in support for the ruling coalition ($p < 0.01$), a 4.3 percentage point decrease in support for Dias ($p < 0.01$), and a 5.5 percentage point decrease in support for Sonko ($p < 0.01$). After conditioning on education and business revenue, these estimates increase slightly in magnitude (7.0, 5.5, and 6.3 percentage points, respectively), with significance levels unchanged. Family connections to the state and board membership with a politician do not predict vote choice in any specification.

This pattern is consistent with the interpretation that the ruling coalition's differential appeal lies in its clientelistic rather than programmatic credentials. Table L13 reports the full results.

Table L13: Clientelism proxies and vote choice

	Dependent variable:					
	Vote ruling	Vote Dias	Vote Sonko	Vote ruling	Vote Dias	Vote Sonko
	(1)	(2)	(3)	(4)	(5)	(6)
Clientelism beneficial (1-5)	0.059***	−0.043***	−0.055***	0.070***	−0.055***	−0.063***
	(0.012)	(0.014)	(0.012)	(0.012)	(0.015)	(0.013)
Family in state	−0.003	−0.003	−0.002	−0.003	−0.002	−0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Board member w/ politician	0.068	−0.005	−0.030	0.074	−0.019	−0.035
	(0.057)	(0.069)	(0.060)	(0.059)	(0.070)	(0.062)
Education				−0.017*	0.010	0.009
				(0.010)	(0.012)	(0.010)
Business revenue				0.014	0.026**	0.012
				(0.011)	(0.013)	(0.011)
Constant	0.118***	0.506***	0.627***	0.103**	0.419***	0.583***
	(0.024)	(0.029)	(0.025)	(0.044)	(0.052)	(0.046)
Observations	1,057	1,057	1,057	944	944	944
R^2	0.028	0.011	0.021	0.041	0.021	0.028
Note:						* p<0.1; ** p<0.05; *** p<0.01

M Tax payment by firm formality status

To document the fiscal experiences of formal and informal firms, we report the share of firms in each sector that pay various types of taxes. Formal firms pay state-collected taxes—including the *Contribution Globale Unique* (CGU), corporate income tax, value-added tax, import duties, and property tax—at substantially higher rates than informal firms. Among municipality-collected taxes, local taxes and the municipal tax are similar across sectors, while the publicité tax is paid at more than twice the rate by formal firms (15.3% versus 6.9%). Informal firms report paying informal business taxes at more than double the rate of formal firms (15.5% versus 6.9%), and a larger share of informal firms report paying no taxes at all (15.5% versus 12.2%). These patterns

underscore the distinct institutional relationships that formal and informal firms maintain with the state. Table M14 reports the full breakdown.

Table M14: Tax payment by firm formality status. Percentage of firms in each sector reporting payment of each tax type in the previous year. State-collected taxes include CGU, IS, TVA, import, and property taxes. Municipality-collected taxes include publicité, conteneur, municipal, and local taxes. Informal business taxes are collected by agents of the mayor without formal process.

	Formal (%)	Informal (%)	Difference (pp)
State-collected taxes			
Contribution Globale Unique (CGU)	12	6	6
TVA	11.5	10.6	0.9
Property tax	7.7	4	3.7
Impôt sur les sociétés (IS)	4.1	1.8	2.3
Import tax	3.3	1.7	1.6
Municipality-collected taxes			
Local taxes (patente/foncier)	73.9	76.6	-2.7
Municipal tax	32.8	32.2	0.6
Publicité tax	15.3	6.9	8.4
Conteneur tax	1.7	1.8	-0.1
Informal taxes			
Informal business taxes	6.9	15.5	-8.6
No taxes			
No taxes paid	12.2	15.5	-3.3
Observations	494	668	

Appendix References

ANSD. 2016. *Synthèse des Resultats du Projet de Renovation des Comptes Nationaux*. Dakar: Agence Nationale de la Statistique et de la Démographie (ANSD), Ministère de l'Economie des Finances, et du Plan, République du Sénégal.

Beck, Linda J. 2008. *Brokering democracy in Africa: The rise of clientelist democracy in Senegal*. Palgrave Macmillan.

Boone, Catherine. 2003. *Political topographies of the African state: Territorial authority and institutional choice*. Cambridge: Cambridge University Press.

Kitschelt, Herbert. 2013. *Dataset of the Democratic Accountability and Linkages Project (DALP)*. Durham, NC: Duke University.
URL: *https://sites.duke.edu/democracylinkage*

Koter, Dominika. 2013. "King Makers: Local Leaders and Ethnic Politics in Africa." *World Politics* 65(2):187–232.

O'Brien, Donald B. Cruise. 1971. *The Mourides of Senegal*. Oxford: Oxford University Press.

Resnick, Danielle. 2013. "Continuity and change in Senegalese party politics: Lessons from the 2012 elections." *African Affairs* 112(449):623–645.