The Inefficacy of Land Titling Programs: Homesteading in Haiti, 1933—1950

Craig Palsson

Seth Porter

June 13, 2023

One of the most common policy recommendations in developing countries is titling land. Yet, titling programs around the developing world frequently fail. We try to understand these failures by exploring a titling program in Haiti in the 1930s. The program offered tenants renting public land an opportunity to privatize the land as a homestead, giving them title and ending rental payments. We find that participation in the rental program does predict program take-up, yet the program granted fewer than 700 homesteads in its first 16 years. After showing that low uptake cannot be explained by high administrative costs or political motives, we suggest a major barrier to adoption was the requirement to farm 50% of the plot in cash crops.

Since property rights in developing countries are often insecure and poorly defined, one of the most common policy recommendations is to title land. Countries that have implemented such programs have seen significant efficiency gains: titling land increases investment on the property (Galiani & Schargrodsky, 2010) and frees labor to move to better opportunities (Agyei-Holmes et al., 2020; Chernina et al., 2014; De Janvry et al., 2015; Field, 2007). Despite the benefits, the efficacy of land title programs appears to be low. In Sub-Saharan Africa, 23 countries have implemented titling programs, yet almost none of the programs succeeded in widespread titling (Ali et al., 2014; Deininger et al., 2008) For example, Ghana established a titling program in 1988, but by 2006, out of a population of 23 million, it had only received 42,000 applications (Kuntu-Mensah, 2006). De Soto (2000) documents similar titling programs in Haiti and Peru that receive few applications relative to the amount of untitled land. Why are titling programs in developing countries ineffective?

In this paper, we look at the factors affecting the efficacy of titling programs using a homesteading program in Haiti. This program aimed to transfer state-owned land to farmers who were willing to rent and improve the land for two years. After the two-year probation, farmers gained full title. This program has several benefits for examining hypotheses about the efficacy of titling programs. One explanation for low efficacy is that the potential beneficiaries do not believe the government has the capacity to enforce the title. But this program avoids this concern because it targeted farmers who already chose to rely on the state to protect property, so we know that they trusted the government's capacity. Low efficacy is also often attributed to titles providing few benefits over informal ownership. The homesteading program overcomes this because it was designed to give strictly better property rights than what the farmers had. Finally, another explanation is that the administrative burdens to requesting the title are too large. Indeed, De Soto (2000) argues this is one of the main barriers and argues for it specifically regarding this exact titling program in the 1990s. This program allows us to address this concern because we observe it at its inception and can see what administrative burdens looked like from the beginning.

We collect data on all land titled under this program during its first 15 years. We find that in this period the government issued only 679 titles. In 1933, the government estimated there were 28,857 tenants renting state land (Haiti Bureau du representant fiscal, 1933, p. 163), meaning that approximately 2% of the number of plots converted. We also collect data on the amount of rental

revenue collected in each district, which acts as a proxy for how many local properties qualified for titles.

We report three main empirical results. First, we show that participation in the rental program predicts participation in homesteading: a 10% increase in rental program participation in 1933 is associated with a 6% increase in homestead titles between 1934 and 1950. This suggests the program succeeded in offering better property rights than simply renting land, but participation in both programs was so low that the title's benefits are inadequate to explain the low number of titles. Second, we show no significant relationship between administrative delays and homesteading. Finally. there is no evidence that the homesteaders were more politically connected than the average tenant. Indeed, the evidence tips slightly in the direction of the tenants being more connected.

Since the empirical tests fail to explain why titling is generally so low, we consider whether the title restrictions impeded program adoption. While the title gave the holder ownership of the land, the government retained the right to require homesteaders cultivate 50% of the land in a cash crop. We present evidence that the government enforced this right and that it was a significant barrier to adoption. After discussing the motives behind enforcing the right, we conclude that this program is an example of a property rights gap (Albertus, 2021) and wealth-destroying property rights (Leeson & Harris, 2018).

This paper contributes to our understanding of titling programs. While people have long advocated for titling property, the titles are frequently underutilized. Some of the common explanations for this are that the titles do not provide much of a benefit over the status quo (Dye & La Croix, 2013; Panman & Gracia, 2022) and that the potential beneficiaries do not trust the state to enforce the title (Albertus, 2021). Even though the Haitian homesteading program addresses these issues, the program was still underutilized due to restrictions on the title.

This paper contributes to our understanding of the barriers to resolving misallocation problems in agriculture in poor countries. Across the developing world, small farms have led to a misallocation of resources (Adamopoulos & Restuccia, 2014). These small farms are the result of poorly defined property rights and policies biased towards smaller plots. But when farmers receive clear rights to hold, transfer, or lease their land, land is reallocated to better uses and labor is freed for more productive activities (Agyei-Holmes et al., 2020; Bolhuis et al., 2021; Chari et al.,

2020; Field, 2007). This paper shows that it is not sufficient to offer the opportunity to receive these rights if onerous restrictions prevent them from receiving the title.

Finally, this paper helps us better understand how to design titling programs. Property rights programs are social decisions meant to engineer certain outcomes (Heller & Salzman, 2021). Just granting titles is not enough to achieve productivity gains. For example, sometimes the program design has to consider how to organize titles to minimize the costs of enforcement (Allen, 1991). Despite all of the failed programs throughout Sub-Saharan Africa, Ethiopia managed to succeed through intelligent program design (Deininger et al., 2008). The Ethiopian program kept costs low, resolved disputes efficiently, and, most importantly, actively sought out 20 million plots around the country. But titling programs usually are needed in countries with low capacity. In those cases, titling can be promoted through a community-based organization that actively recruits beneficiaries (Nickow & Kumar, 2021). This paper suggests that governments wanting to use titling programs to increase export crops need to offer better assurances, training, or credit to get farmers on board.

Land Titling – Theory and Evidence

The connection between productivity and secure property rights is one of the most well-known and simplest theories in economics. Suppose there is an investor with a property that will produce a return $R(e)$, where e is a measure of the effort contributed to the project (where effort can be labor, capital, or any other input). $R(e)$ is increasing in e but exhibits diminishing marginal returns. Thus, the investor will contribute effort until the marginal return equals the marginal cost. When property rights are insecure, the investor expects to only keep a fraction of the return, $\rho R(e)$, where $0 \leq \rho < 1$. Since threat to property reduces the marginal return on effort, the investor reduces the effort contributed to the project. Thus, as property rights improve (i.e., ρ gets closer to one), the investor allocates more effort towards the property, and it becomes more productive. Several studies have confirmed that better security leads to more investment (Goldstein & Udry, 2008; Hornbeck, 2010).

Since stronger property rights lead to higher productivity, some development theorists have advocated for titling land.[1] Titling land improves security by providing an official record of who owns the property and a commitment from the state to enforce that claim. Titles also create a mechanism for property to be transferred to another owner or pledged as collateral. When property owners can transfer title to the land, either through selling the land or leasing it, land moves from less productive farmers to the more productive (Chari et al., 2020; De Janvry et al., 2015). While property owners can protect their property through their own efforts, titles let them reallocate that effort towards more productive pursuits (Field, 2007; Agyei-Holmes et al., 2020). Finally, titling land enables potential migrants to sell or lease land to finance their migration (Chernina et al., 2014; De Janvry et al., 2015).

Despite both the theoretical and empirical evidence that land titles lead to a more efficient allocation of resources, various land titling programs in poor countries have yet to capture significant interest or attract widespread attention. As mentioned in the introduction, Ghana's 1988 titling program received few applications (Kuntu-Mensah, 2006). Similarly, Senegal and Zambia offered titling programs, yet both countries had low land titling rates of 7.08% and 7.51%, respectively (Honig, 2017). In Tanzania, only 4% of landowners surveyed had an official Certificate of Right of Occupancy (CRO) even though 40% of them had the necessary forms (Panman & Gracia, 2022). Generally, programs across 23 Sub-Saharan countries had limited demand (Ali et al., 2014; Deininger et al., 2008).

A basic theory behind the low efficacy of these programs is that the benefits from the titles do not exceed the costs of titling. A title from the government might not be valuable when local customs sufficiently protect the property. In Tanzania, titled property is priced the same as untitled property since title does not provide any benefits over the local customs (Panman & Gracia, 2022). Or the benefits might be low because there are few threats to the property. Looking at the history of Argentina and New South Wales, Dye and La Croix (2013) show that in New South Wales the demand for titles was low because settlers had sufficient resources to protect their own properties, but in Argentina the settlers waited for the government to offer titles as a guarantee against the indigenous threats to property. Similar outcomes are shown in Cape Colony:

[1] Note that some development thinkers believe titling is the wrong prescription for poverty alleviation (Bromley, 2009).

when the indigenous threat dwindled as a result of population decline, the colonial government expanded settlement through less well-defined property rights (Dye & La Croix, 2020). Titles do not provide many benefits when most transfers are made through personal connections rather than impersonal interactions, such as in Afghanistan (Murtazashvili & Murtazashvili, 2015). The benefits also might be low if credit market failures make it difficult to securitize a loan with the title (Bromley, 2009). Even if the benefits are high, the title's costs might be higher. De Soto (2000) documents many countries that offer the opportunity to title land but where the administrative costs are so high that they deter applicants. Indeed, De Soto examines the same Haitian titling program that we examine here, but we look at the beginning of the program before the administrative costs were high.

In addition to this explanation that the benefits are too low, Albertus (2021, pp. 104–105) suggests two other explanations for why the titling programs fail. First, the potential beneficiaries may think the state is too weak to enforce the titles. While this is related to the low benefits explanation, it is distinct. The potential benefits of a title could be large, but if the state does not enforce the title, then it is worthless. This explanation is one that we are not worried about in Haiti because, as we explain below, the program targeted people who had already relied on the state to enforce property claims. One of this paper's contributions is showing low efficacy in an environment where trusting the state could not have been a barrier to demand.

The second explanation listed by Albertus is that the authority that enforces customary property rights can block access to the formalized rights. One instance of such control is in Kenya, where various local elites colluded to use their veto powers to torpedo land reforms that would have led to a more fair and more transparent land distribution process (Boone et al., 2019). Customary authority is rarely discussed in Haiti, so we do not anticipate this being a powerful hypothesis for explaining low demand for titles.

From this discussion, there are two main hypotheses to examine. The first is that titling is low due to low demand because of the costs not exceeding the benefits. The second is that there are potential political factors that affect the efficacy of titling.

Haiti's Homesteading Program

To examine the efficacy of titling programs, we use Haiti's homesteading program. In this section, we outline the program's history and design. We argue that this program is important for testing hypotheses for two reasons. First, the program targeted a group of property holders who had already trusted the state for property protection, so we do not have to worry about whether the potential beneficiaries believe the government can enforce its rights. Second, it was designed to offer significant benefits at low costs. While this should resolve the low benefits hypothesis, we can empirically test this one.

In the revolution that culminated in independence from France in 1804, the Haitian state became the country's largest landholder. Initially, the state tried to run the plantations to keep the economy running in what Ferrero (2021) describes as agrarian socialism. But the government soon realized this was unsustainable. In 1809, it began breaking up the colonial sugar plantations and redistributing land to the military, then it eventually sold properties to finance government operations (Murray, 1977, pp. 76–77, 102). At the same time, the freed people started migrating to the country's uninhabited interior, settling on the unused land (Murray, 1977, pp. 18–20). These forces led to widespread land ownership, but the state still remained the largest landholder (Palsson, 2021a).

But much of the state-owned land was unused. US officials during the American occupation of 1915 to 1934 noted that the state owned about 915,000 hectares, but that most of that land sat idle (Millspaugh, 1929; Palsson, 2021a). While one might try to explain the idle land by assuming it was lower quality, there is some evidence that the Haitian farmers saw it as higher quality than what they owned. When the government offered to exchange state-owned land for private land, the program became so popular that the government had to shut it down because it (predictably) lost high-quality land in exchange for low-quality plots (Banque nationale de la Republique d'Haiti, 1941; Renaud, 1934, p. 228).

Table 1. Comparison between the 1932 and 1934 homesteading acts

1932	1934
Requirements to get title	
Be at least 21 (either sex)	Be at least 21 (either sex)
Rent from state for 3 years	Rent from state for 2 years
File a form stating intent to homestead	File a form stating intent to homestead
Reside on or near property for 3 years	Reside on property for 2 years
Current on rental payments	Current on rental payments
Build a house on the property (could be fulfilled within 3 years of obtaining title)	Pass inspection that the land is cultivated
Restrictions on title	
Cannot be mortgaged, leased, or sold until 20 years after title granted	Government has option to require 50% of property planted in cash crop (with two years' notice)

Notes: Requirements listed in the Law of 5 September 1932 and the Law of 12 January 1934.

Under the US occupation of Haiti, a primary policy goal was to move state-owned land into agricultural production. As early as 1920, officials began recommending a homesteading program that would put that idle land into private hands (Republic of Haiti, 1920, pp. 10–11). American officials had implemented a similar homesteading program in the occupation of the Dominican Republic (Turits, 2003, pp. 72–73). The officials in Haiti noticed that there had already been an attempt to implement a homesteading program in 1883, but that it was a "complete failure" (Haiti Bureau du representant fiscal, 1928, pp. 76–78). They blamed the early failure on homesteaders becoming absentee landowners and resolved to correct this problem by requiring the homesteaders to live on the land.

The first attempt at homesteading legislation was passed in September 1932. In the law's preamble, the legislation was motivated as a way to encourage agricultural development by households through more secure titles and, interestingly, to prevent an exodus of rural migration. The requirements to homestead are listed Table 1. The law provided that anyone 21 years or older could homestead up to 5 hectares (12.4 acres) by fulfilling three main requirements: (1) the applicant had to rent the land from the government for three years; (2) he had to be current on rent payments; (3) he had to live on or near the property itself and cultivate it for three years. In

exchange, the applicant would receive a title to the land, its buildings, and all output. But the title had a restriction. In fact, this restriction was named before any of the title's benefits or qualifications were listed. The property could not be sold, leased, or mortgaged in the first twenty years. The only transfer right bestowed on the title holder was the right to will the property to an heir at death.

In the eyes of the officials designing the homestead program, this restriction destroyed the entire point of the program. The restriction was not in the original legislation but was added by the legislators at the last minute. The addition was likely because the government wanted to retain control of the state land instead of giving it to farmers, an early sign that the restrictions would be a barrier to implementation. Such modifications seem to be a routine feature in the legislative process because the officials mention six other laws they helped design that were also modified by the Legislative Body (Haiti Bureau du representant fiscal, 1932, pp. 49–50). But this modification received more attention than any other because of its stark effect on the purpose of the law. "Unfortunately the law which was enacted does not offer advantages enough to encourage homesteading. Unless it is modified it will be found to be completely ineffectual" (Haiti Bureau du representant fiscal, 1932, pp. 27–29).

In 1934, the officials succeeded at passing a new homesteading law. Table 1 lists how the requirements changed between laws. Under the new law, applicants could still homestead up to 5 hectares by fulfilling similar requirements, though the time on the plot was reduced from 3 years to 2 and it added a requirement that farms had to pass an inspection by the National Service of Agricultural Production. Most importantly, the law removed all restrictions on selling, leasing, or mortgaging the property. While the reform added one provision on planting cash crops (discussed further below), the officials called this reform "the outstanding accomplishment" of that year's legislation, "thereby making really effective a law which had been rendered useless because of the excessive restrictions which it imposed upon prospective beneficiaries" (Haiti Bureau du representant fiscal, 1934, pp. 3, 83).

Haiti's homesteading program helps us understand the efficacy of titling programs because the associated rights were designed to be better than the alternative. The homesteading program was part of a broader strategy to improve the use of state-owned land, and it built on an earlier reform in 1927 that made renting government land more attractive. The program's requirement that

homesteaders rent the land for two years before homesteading meant that they had to participate in this program before receiving a title. Furthermore, tenants who started renting land before the homesteading program began could immediately convert their rental plots into homesteads.

Since the homesteading program built on the rental program, it eliminates concerns over whether potential homesteaders would trust the government titles or if the government guarantees were better than local or private protection. While property ownership in Haiti was widespread, nearly all of these farmers were either on land without well-defined titles or were squatting on public land. The rental program provided farmers an opportunity to obtain protected property in exchange for an annual rental payment. The rental program reported in 1933 that there were nearly 29,000 tenants. Because they were willing to pay rent instead of squat, these tenants had already revealed that they preferred state-guaranteed protection over local protection. The homesteading program did not have to convince them to trust a state title; it just had to convince them that the rental contract was inferior to the homestead title.

One way the homestead program was designed to be superior to rentals was through prices. This was a difficult target because one of the rental program's key selling points was subsidized rent. The 1927 reform set rent at 6% of the plot's local appraised value, which was an improvement over the previous law's standardized rental rates across regardless of the plot's location. One of the program administrators wrote that reformers explicitly chose the rate to be lower than market mortgage rates (Millspaugh, 1929). Not only was rent competitive, the law fixed rent for 10 years, letting inflation decrease the real price over time. While the rental program subsidized rent, the homestead program offered something better. Once the property was a homestead, the tenant no longer had to pay rent. And since Haiti did not have a land tax, once the property was a homestead, the owner had no taxes or fees on the property.

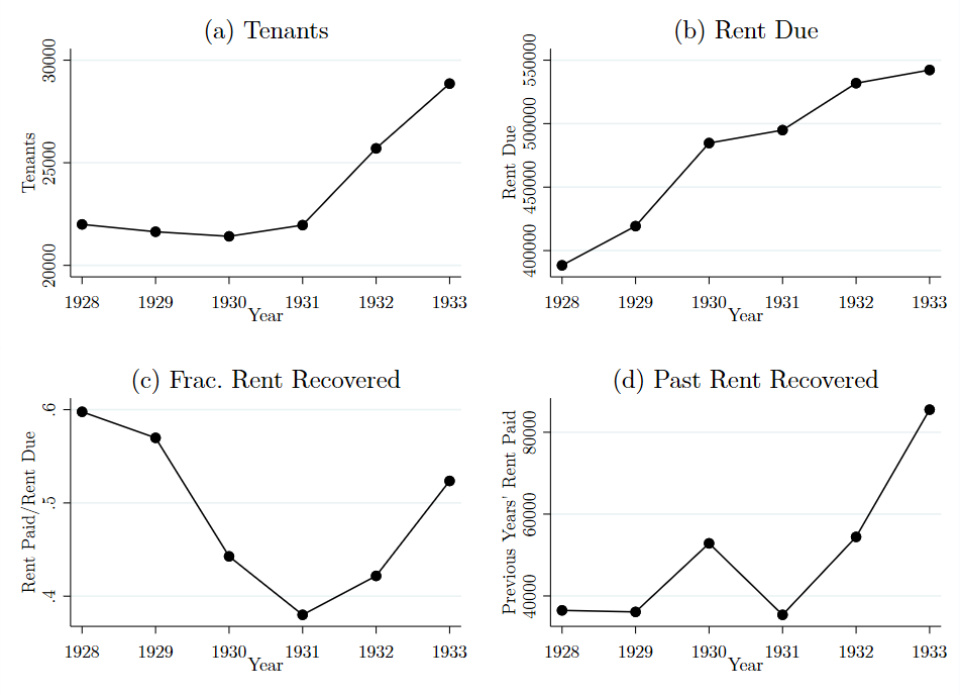
Another way the homestead program was superior to the rental program was how it gave homesteaders an incentive to invest in the land. While the rental program did not give private titles, it tried to attract tenants by making them residual claimants on investments on the land. After the first decade of fixed rent, the government could reappraise the plot and set a new rent. But the reappraisal could not account for any improvements the farmer had made. Thus, for the government this was protection from inflation eroding its revenue, and for the farmers this was an incentive to improve the property despite not fully owning it. The homestead program

improved on this part of the program by giving the homesteader lifetime rights to improvements on the land and transfer rights. The rental program benefits were conditional on timely payments, and they were limited to the first 20 years of renting. After 20 years, the law allowed the government to fully reappraise the plot and capitalize the improvements. Furthermore, the rental program did not let tenants sell, lease, mortgage, or transfer their property. The 1934 homesteading program, on the other hand, gave owners full transfer rights, giving them immediate access to improvements they made to the land.

One price deterrent to applying for a homestead could be the cost of applying, though it seems like this was not a problem. The homestead program required applicants to pay a stamp tax of 1 Haitian Gourde (HTG) per hectare, plus another 2 HTG for registering the property. Since homesteads were capped at 5 hectares, the maximum taxes and fees for the application was 7 HTG. But this cost is small relative to rental rates. The aggregate statistics reported by the fiscal administrator show that the average rent in 1933 was 18.8 HTG. Thus, for someone current on rent, the cost of applying was recovered in the first year.

Since the rental program was the gateway to homesteading, interest in homesteading should have triggered increased interest in the rental program. From 1928 to 1933, the fiscal adviser reported aggregate statistics about the rental program that might show the homesteading program sparked some interest. These statistics are summarized in Figure 1. In 1928, the state had 22,000 rental contracts worth 232,000 Haitian Gourdes (HTG). Figure 1a shows that the number of tenants stayed constant through 1931, though Figure 1b shows the amount of rent due increased during this period, suggesting that new contracts replaced old contracts. But starting in 1932, when the first homesteading law was passed, there was a significant jump in the number of tenants—resulting in over 28,800 tenants by 1933. More importantly, recovery rates for rent significantly increased at the same time, as shown in Figure 1c. At its nadir in 1931, the program was only recovering 38% of rent due, but by 1933 it was collecting 52% of rent. Furthermore, Figure 1d shows it significantly increased its collection of overdue rents. These observations are consistent with interest in the homesteading program: the opportunity to privatize the land should have increased the number of people interested in renting land and, since the title was conditional on being current on payments, the number of tenants paying their rent.

Figure 1. Rental payments and recovery rates, 1938—1933



Notes: Figures were reported by the Fiscal Representative in his annual reports.

But even though the data are consistent with interest in the homesteading program, we cannot conclude that the homesteading program caused this increase. The biggest point against a causal effect is that these changes happened after the first homesteading act of 1932, but we have no evidence for anyone receiving a homestead under this program. This lack of evidence might be because the 1934 homestead law took precedence before anyone could fulfill the requirement to be on the homestead for three years. Instead, effects to the rental program may be a result of the administration putting a greater emphasis on tracking land and recovering rents once there was a chance to homestead. For example, at this same time the administration was employing an American lawyer to "organize a section of this office to supervise the search for land belonging to the state not at present on its rolls, and to examine titles of occupants of land claimed by the state with a view to determining whether or not such land is a part of the private domain of the state" (Haiti Bureau du representant fiscal, 1929, p. 127).

Even without addressing causality, the rental program provides a good start for where to look for interest in the homesteading program. When the 1934 act passed, there was a pool of 28,800

tenants. But since the program required tenants to be current on rent, and since the government collected only 52% of rent in 1933, this pool was likely closer to 15,100 tenants. The increase in backpay seen in 1932 and 1933 would have made this pool slightly larger, but an upper-bound estimate of tenants who were current on rent is 19,500.[2]

Data on Homesteads

We collect data on every homestead granted between 1932, when the first homestead law was passed, and 1950. According to the homesteading laws, before a homestead could be granted in full, a notification had to be published in the government's gazette, *Le Moniteur*. We collect the universe of notifications published in *Le Moniteur* from 1932 to 1950 and find 679 homesteads. All were granted under the 1934 program, none under the 1932 program.

We also collect data on homesteads from the memoirs of President Sténio Vincent (Vincent, 1938). In his memoir, Vincent describes the program's success and then lists the names and locations of homesteads granted during his presidency. His list contains 308 homesteads, all of which were also listed in *Le Moniteur*.

The data on homesteads do not include homesteads granted to refugees fleeing the Dominican Republic after the Trujillo Massacre. In October 1937, the Dominican president, Raphael Trujillo, sanctioned the massacre of thousands of Haitians living in the DR. The Haitian government settled the refugees in camps near the border and gave many homesteads (Palsson, 2023), but these homesteads were neither listed in *Le Moniteur* nor in Vincent's memoirs. Since these homesteads were granted under unique circumstances, their omission does not affect the main question under investigation.

[2] The total payments collected, both current rent and backpay, was 68% of rent due. Assuming all payments were from individual tenants, this would be 19,500 tenants. But this double counts some tenants since the payments include backpay, which means 19,500 is an upper bound estimate of tenants who were current on rent.

Figure 2. Titles granted by Year, 1930—1950

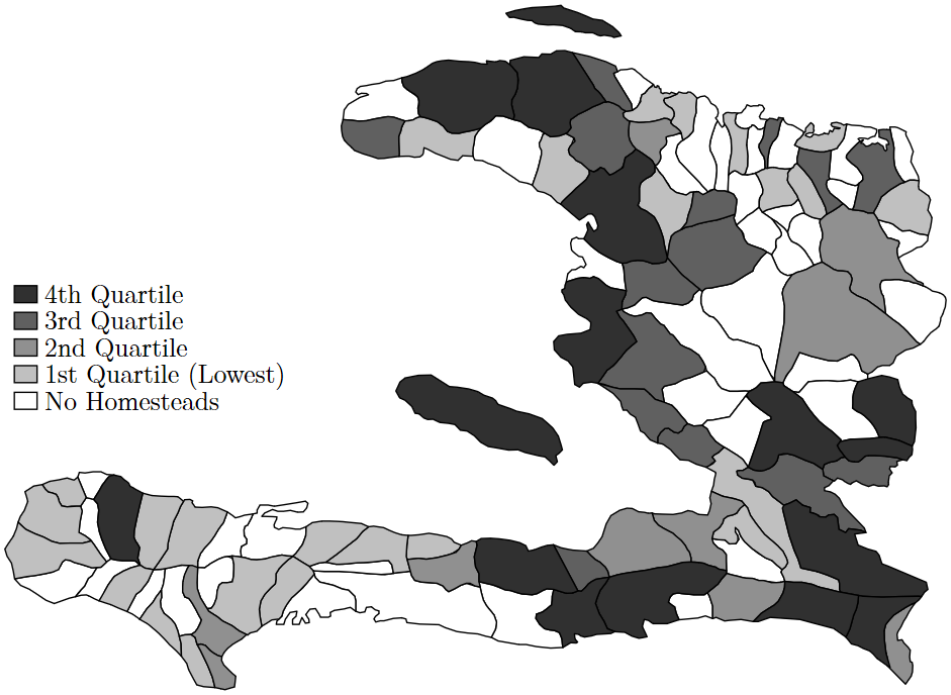
Notes: The graph shows the year the year the title was granted conditional on a title being approved between 1930 and 1950. The vertical dashed lines are the two years when the 1932 and 1934 homestead legislation were passed.

The number of homesteads granted by year are reported in Figure 2. Homesteads began being granted in 1935 and peaked in 1937. There was a sharp drop during 1938 and 1939, just after refugees fleeing the massacre of Haitians in the Dominican Republic put a huge burden on the rental program (Palsson, 2021b). After a brief recovery in 1940, there were no more titles granted from 1942 to 1950.

Figure 3 shows the spatial distribution of the plots. The homesteads were concentrated in a few districts, with 4 districts accounting for 43% of the total. There were also regions where homesteading is entirely absent. Neither the Southwest nor the Northeast participated much in the program.

The areas with the most homesteads were along the Southern border, which may be because defining the border was one of the period's key policy disputes between Haiti and the Dominican Republic. This was the part of the border that was most contested and where Trujillo established

Figure 3. Map of homestead take-up by district



agricultural colonies in 1931 (Turits, 2003, p. 157). It is possible that Haiti also saw homesteading as a border control policy. In spring of 1938, Trujillo evicted thousands of Haitians from the South and pushed them over the border in an event called *el desalojo*. If homesteading was a part of establishing the border, then this region would have been key. The Northern border, however, is nearly devoid of homesteads even though that was the site of the 1937 massacre. Thus, fortifying the border may have been part of the homesteading strategy, but it was not the key goal.

We also collect data on tax receipts, including land rental payments, by commune from 1925 to 1931. These receipts were reported in the annual reports of the financial adviser/general receiver as part of the US occupation. The three main categories were public land rentals, vital statistics fees, and recording fees for transferring property. The rental receipts are a proxy for the popularity of the land rental program, which should predict the communes where the homesteading program was most likely to succeed. The other receipts allow us to control for local variation in state capacity.

Finally, we create a proxy for political connections using a directory of historical Haitian politicians. Using the homesteaders' names, we look for potential connections in Supplice's (2014)

Dictionnaire biographique des personnalités politiques de la République d'Haïti (1804-2014). This dictionary lists all office holders in Haiti from 1804 to 2014 as well as a short biography on where they lived. In the empirical strategy below, we describe the political connection proxy.

Empirical Strategy

The central question of this paper is why the efficacy of land titling programs is low in developing countries. In this section, we outline the plan for testing different explanations.

The simplest hypothesis for low efficacy is that the benefits of the title do not outweigh the costs. The implication is that demand for titles should be higher in areas where the benefits are higher. Fortunately, one of the unique features of this program is that we can easily identify who should most benefit from it since it targeted tenants in the state rental program. If the cash crop provision was nonbinding, as discussed below, then the homestead title strictly dominated the rental title. Thus, we should see a higher demand for titles in districts with more tenants.

We empirically test this hypothesis with the following regression:

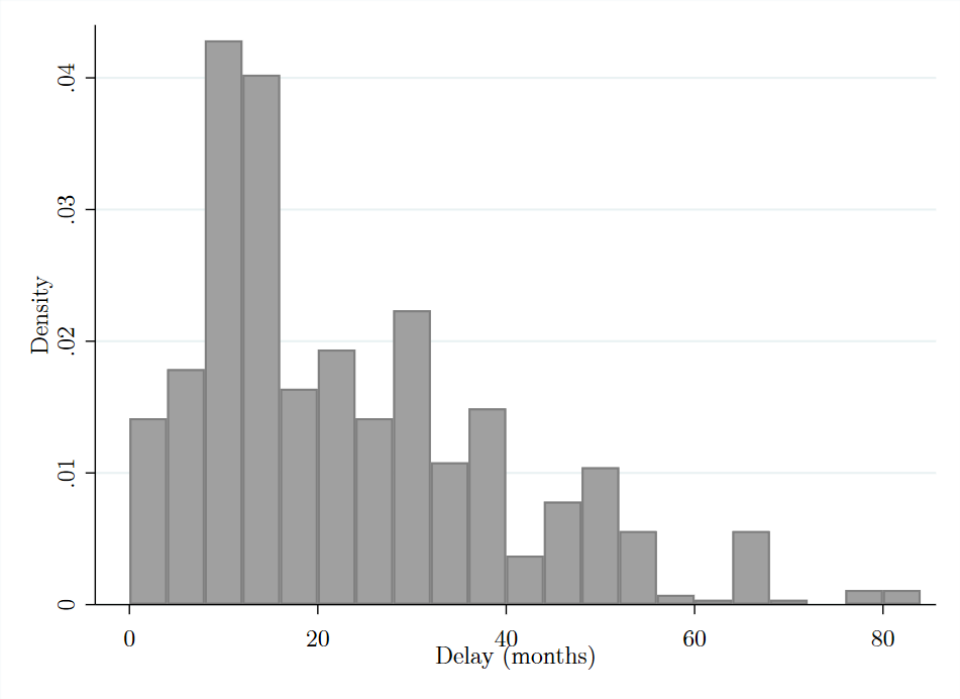
$$H_d = \beta_0 + \beta_1 R_d + \Gamma X_d + \varepsilon_d$$

where H_d is a measure of the extent of homesteading in district d, such as the number of homesteads; R_d is the total amount of rent collected from tenants in district d from 1925 to 1931, which measures participation in the program; and X_d are district-level variables that might predict homesteading. We use three controls: the total other tax revenues collected in the commune, the literacy rate, and the share of the population in agriculture. If homesteading offers tenants better rights, we expect $\beta_1 > 0$.

Note that we are not attributing a causal effect in this regression. To identify a causal effect, we would have to claim the demand for rental property is exogenous to all other factors that influence the demand for homesteading titles. Yet clearly this assumption would be wrong. The homesteading program targeted tenants, so clearly the government would expect that the same factors that created tenants would also create homesteaders. For instance, if land scarcity varies across districts, we might expect districts where land scarcity is high to create greater demand for rental properties and homesteads.

The second hypothesis we want to examine is whether the administrative burden deterred demand. This is interesting, since costly application procedures could ruin an otherwise well-

Figure 4. Distribution of the delay between request and approval



Notes: The delays are for all homesteads granted between 1934 and 1950.

intentioned program. But in the case of Haiti's homesteading program specifically, the poor performance has been blamed on administrative burden. In De Soto's (2000) seminal book *The Mystery of Capital*, he discusses this exact program and claims the administrative program killed it. His analysis in the 1990s found that titling land in Haiti took 12 years (p. 22). The benefit of this study is that we can go to the program's inception and explore whether this has always been a problem.

We test the implication of this hypothesis by looking at whether variation in administrative delays predict homesteading. The administrative delay is the delay between the application date and the approval date. There was significant variation in delays across homesteads. Figure 4 shows the distribution of delays. The median delay was 18 months, but the modal delay was between 8 and 16 months, which are much shorter than the 12-year delays found in De Soto (2000, p. 22). We want to look at whether longer delays deter homesteading, but there is a problem. Since over 50% of districts do not have homesteads, we cannot observe delays in the homesteading process for most districts in the data. We resolve this problem by using administrative delays for new

rental contracts. Rental properties were more common than homesteads, so we have more data on their delays. Furthermore, the same office handled homesteads and rental properties, so potential homesteaders would have formed their expectations based on how rentals were handled.

To empirically test the hypothesis, we run the following regression:

$$H_d = \alpha_0 + \alpha_1 Delay_d + \Gamma X_d + \varepsilon_d$$

where H_d is the demand for titles in district d, $Delay_d$ is the average delay for rental properties in district d, and X_d is a set of controls as listed above. Since not all districts have new rental contracts during our sample period, we assume these districts' delays look like the closest district with new contracts and use that district's data. To account for this imputation in inference, we cluster standard errors based on the source of the delay data.

If administrative delays deter homestead demand, we expect $\alpha_1 < 0$. But we could see the opposite if high demand for government property leads to longer delay times. Indeed, this is what we saw in 1938, when refugees fleeing the Dominican Republic requested rental land and overwhelmed the program's capacity, turning 7 month delays into 4 years (Palsson, 2021b). To avoid the refugee problem, we measure delays using only properties requested in 1937 or earlier. But this does not eliminate the reverse causality problem. Ideally, we would use an instrument that shifts delays without affecting demand, but since we do not have a plausible identification strategy, we will have to interpret the estimates with the understanding that there could be a positive bias to the coefficients.

The third hypothesis we want to test is whether the demand for titles is driven by political connections. One hypothesis is that the homesteading program was never meant to succeed as broad-based land redistribution. Instead, it could be a political tool meant to generate favor through reallocating state land to the politically connected. One could even argue that President Vincent's behavior supports this theory because he lists over 300 of the program's beneficiaries by name in his memoirs.

Testing this hypothesis at the district level is difficult. One way to test it would be to look at districts that supported President Vincent to see if they were more likely to receive homesteads. Or one could look at whether homesteading in a district caused an increase in political support. Unfortunately, there are no known measures of district-level political support, such as election results or political attitudes. Instead, we consider the hypothesis that individuals who were more

politically connected had greater access to homesteads. This approach is still difficult because we do not know who the most politically connected individuals in a district are. But we do know the homesteaders' names, and we can compare their political connections to tenants renting state land and see if the homesteaders are more connected.

We test this hypothesis by creating a variable to measure the homesteader's political ties. Using names from homesteaders and tenants, we construct three proxies for whether the person was politically connected. Using Supplice (2014), we create a variable for whether they share a surname with any politician in the book, another for whether they share a surname with a politician in the same district as the property, and a final for whether they have the same name as a politician in the same district as the property. We then estimate the following regression:

$$P_i = \gamma_0 + \gamma_1 Homestead_i + \varepsilon_i$$

where the dependent variable is one of the three proxies for political connections and where $Homestead_i$ is an indicator for whether the individual is on a homestead rather than a tenant. Note that the unit of observation has switched from the district to the individual. The sample includes all homesteads granted between 1934 and 1950 as well as all new rental properties issued before the homestead act was passed (1928—1934). The hypothesis is that homesteaders are more politically connected than tenants, so we anticipate that $\gamma_1 > 0$. We also run another test where we include an interaction term:

$$P_i = \gamma_0 + \gamma_1 Homestead_i + \gamma_2 Homestead_i \times Memoir_i + \varepsilon_i.$$

This interaction term is whether the homesteader was mentioned in Vincent's memoir. Since we believe these are the homesteaders who are most likely to be politically connected, we also predict that $\gamma_2 > 0$.

Again, in this regression we are not claiming a causal interpretation to γ_1 or γ_2. This is a descriptive regression to test if homesteaders appear to be more politically connected than tenants. Sharing a surname with a politician does not mean the individual is related to a politician or politically connected. Furthermore, surnames are a noisy proxy since we assume political connections are only available to family members. Clearly someone unrelated to a politician could still be politically connected, such as later in Haiti's history when business connections predicted support for a coup (Naidu et al., 2021).

These three hypotheses are the three where we have sufficient data to examine them empirically. After the empirical work, we address two alternative hypotheses that may be important but are harder to test.

Results

Titles and Rental Program

We start by testing whether the homestead program was more popular in districts with greater participation in the rental program. Our first outcome is the number of homesteads in a district. Since there are so many districts with zero homesteads, we use a Poisson regression. In each regression, we control for the population in 1950, which is at the end of the sample period but is the only census data available. We also include an alternative specification where the dependent variable is the number of homesteads per capita, but since the results are similar across both specifications, we focus on the number of homesteads since the results are easier to interpret.

The results are reported in Table 2. Without any controls, the coefficient on land rental revenues is 0.35 and is statistically significant at the 1% level. We add a control for the total other revenues collected to account for local fiscal capacity, and the coefficient increases to 0.55 at the same significance. Controlling for literacy rate and the share of the population in agriculture does not affect the result. Finally, since there are 10 chief towns that collect a significant amount of revenue from tenants on urban lots (which were not eligible for homesteading), we restrict the sample to just the rural districts, and the results are stable.

The results show that the demand for better property rights is strongly associated with the number of people who the program targeted, but they also show a tepid response. A 10% increase in public land rental payments is associated with a 6% increase in homesteads. A 10% increase in total payments at the mean is an increase in 877 HTG. Since that is an increase over 6 years, that equates to an annual increase of 146 HTG. Above, we saw that the average tenant paid 18.8 HTG, so this is an increase in about 8 active tenants. On the other hand, a 6% increase in homesteads is 0.4 homesteads. Thus, for each 20 additional active tenants in a district, one decides to homestead.

Table 2. Predicting program take-up

	Number of Homesteads			Any Homesteads		
	(1)	(2)	(3)	(4)	(5)	(6)
log(Land Rental Revenue)	0.40*	0.66**	0.63**	0.036	0.064	0.062
	[0.21]	[0.30]	[0.27]	[0.044]	[0.044]	[0.045]
log(Population, 1950)	0.45	0.51	0.50	0.17**	0.10	0.12
	[0.34]	[0.37]	[0.44]	[0.071]	[0.12]	[0.12]
log(Other Tax Revenues)		0.078	0.013		0.035	0.027
		[0.15]	[0.31]		[0.045]	[0.060]
Literacy Rate		-12	-16		-2.37	-0.8
		[10.5]	[11.6]		[1.85]	[2.37]
Pop. Share in Agriculture		1.52	0.68		-0.44	-0.59
		[4.54]	[4.59]		[0.81]	[0.85]
Exclude Chief Towns			X			X
Observations	90	90	80	90	90	80

Note: Columns 1—4 are Poisson regressions. The commune population data come from the 1950 census. The revenues are total revenues collected from 1925 through 1931. *** p<0.01, ** p<0.05, * p<0.1

While it is hard to judge whether a 5% conversion rate is good or not, it does not demonstrate a large demand for the title.

While the number of tenants is related to the number of homesteads, the relationship between tenants and whether a district participates in the program at all is much weaker. About 55% of districts do not have a single homestead during this period. Table 2 also reports a specification where the dependent variable to a dummy for whether the district had at least one homestead. While the point estimate for land rental revenues is positive, it is not statistically significant in any

Table 3. Testing for administrative burden

	Number of Homesteads			Any Homesteads		
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Average Delay)	-0.18	-0.26	-0.28	-0.033	-0.045	-0.038
	[0.28]	[0.28]	[0.31]	[0.031]	[0.034]	[0.033]
log(Land Rental Revenue)		0.67**	0.63***		0.071	0.068
		[0.27]	[0.24]		[0.045]	[0.046]
Full Set of Controls		X	X		X	X
Exclude Chief Towns			X			X
Observations	90	90	80	90	90	80

Notes: For districts that did not have new rentals in the observed period, the delay is imputed to be the delay from the closest district with valid data. Standard errors are clustered by the source of the delay data. Columns 1-3 are a Poisson regression while 4-6 are a linear probability model. All regressions control for the district population in 1950. The full set of controls includes the other tax revenues collected in the district, the literacy rate in 1950, and the share of the population in agriculture in 1950. *** p<0.01, ** p<0.05

specification. Thus, while active tenants are associated with how much the homestead program is used, the extensive margin is driven by another factor.

Administrative burden

Next, we examine the administrative burden of applying for the program. We look at how the number of homesteads relates to the processing delays for state property. We report the regressions in Table 3. The point estimate shows a negative relationship between delays and homesteads, showing that a 10% increase in delays is associated with a 2% decline in titles. This result is not statistically significant at conventional levels, but it is notable that the coefficient is negative given the potential confounding effect of reverse causality. When we add additional controls, the coefficient's magnitude increases and remains negative, but it is still statistically

insignificant. We find similar results when we look at the extensive margin: a 10% increase in delays is associated with a 3-4 percentage point decrease in whether the district has any homesteads, but again it is statistically insignificant.

These results lend some evidence to the administrative burden hypothesis, but, overall, the support is weak. Not only are the results statistically insignificant, they are economically suspicious. The average delay for rental properties across districts was about 16 months, so a 10% increase is about 6 weeks. Considering all the benefits of having more complete property rights, waiting an additional six weeks should not significantly affect the decision. Since a 2% decline in homesteads is 0.13, this seems to confirm that delays were not a major factor in deterring demand.

The administrative burden hypothesis is further refuted by the change in delays over time. The median delay for homesteads (not rentals) by year of request is plotted in Figure 5. From 1934 to 1936, the median delay decreased from 22 months to 16 months. Delays did increase at the same time as the Trujillo massacre, which is consistent with Palsson (2021b). But the homesteading program resolved delays much quicker, dropping to under a year in 1939 and 1940. Yet even as the delays for homesteads got shorter, there was no subsequent increase in demand for homesteads. Demand disappeared when the administrative burden was lowest.

Of course, the delay for a homestead to be approved is not the program's only administrative burden. There could be significant pre-application costs that we are not observing. We can get an idea on the pre-application time costs by looking at the very first homesteads approved. The homestead law of 1934 was passed in January, and the first requests were submitted in April. Thus, assuming the true application date was the day that the homesteading program was passed, then the upper bound on pre-application delays was three months. A short delay makes sense—unlike new rental properties which can take a long time to survey and appraise (Palsson, 2021b), the properties that qualify for homesteading should be already surveyed and registered in local cadasters.

Thus, while there is some evidence for administrative burden affecting demand, none of it is strong enough to conclude that this was a dominant factor deterring demand. None of this analysis considers the requirement to improve the property over 3 years as part of the administrative burden,

Figure 5. Median delay for a homestead by year requested, 1934-1941

Notes: Graph displays the median delay for the year that the property was requested conditional on having a title granted between 1934 and 1950.

but for someone who has the potential to fully privatize the property, the 3-year delay seems like a small price to pay.

Political Connections

Finally, we test the hypothesis that titling was driven by political connections. In Table 4, we look at the three proxies for political connections: sharing a surname with any politician, sharing a surname with a politician in the same district as the property, and sharing the full name as a politician in the same district as the property. In contrast to the prediction that homesteaders were more politically connected, homesteaders were 10% less likely than tenants to share a surname with a Haitian politician, and the difference is statistically significant at the 5% level. While the other two proxies also show homesteaders were 10% likely to be politically connected, neither is statistically significant.

Table 4. Testing for political connections

	Same Last Name Any Politician		Same Last Name Local Politician		Exact Match	
Homestead	-0.0592**	-0.0457	-0.0184	-0.0232	-0.00723	-0.00434
	[0.0270]	[0.0314]	[0.0166]	[0.0193]	[0.00555]	[0.00647]
Homestead X Memoir		-0.0311		0.0112		-0.00666
		[0.0373]		[0.0229]		[0.00767]
Dep. Var. Mean	0.58	0.58	0.10	0.10	0.01	0.01
Observations	1,345	1,345	1,345	1,345	1,345	1,345

Notes: The dependent variable is a binary for how closely the name matches with a politician listed in *Dictionnaire biographique des personnalités politiques de la République d'Haiti, 1804-2001*. The first set of regressions looks at whether the surname matches any politician listed in the book; the second set looks at whether the surname matches a politician in the same district; the final regression looks at whether the full name is an exact match for a politician in the same district. The sample includes rental plots and homesteads. The Homestead X Memoir interaction is an indicator for whether the plot is a homestead and it is listed in President Stenio Vincent's memoir. ** $p<0.05$

One of the reasons why the political connection hypothesis seemed viable was that the President Vincent listed about 300 homesteaders in his memoirs. To see if these homesteaders were more politically connected, Table 4 also includes a specification for whether the individual was a homesteader mentioned in the memoir. None of the regressions show a statistically significant difference in political connections for those mentioned in the memoir, and only one has a positive coefficient.

The evidence from these proxies does not support the hypothesis that the homestead program was driven primarily by political motives. Of course, we repeat our caveat that these proxies are noisy and limited in their ability to measure political connections, so we do not rule out the hypothesis. But the potential to use the program for political gain was limited. Giving land to political allies is a popular way to gain support, yet those are usually large tracts of lands. The homesteads were limited to 5 ha, which is a large property relative to many Haitian properties,

but small relative to what is needed to achieve economies of scale. Our failure to find a political connection could be because the program's political power was weak.

Onerous Restrictions on Rights

So far, we have seen that participation in the rental program is strongly correlated with homesteading. But participation overall was low. In the program's first decade, fewer than 700 homesteads were created. In this section, we argue that the government blocked homesteading through arduous requirements.

While there is little written on the homesteading program, we have one note from the administration in charge of inspecting the properties, the National Service of Agricultural Production. In a 1942 bulletin (*Rapport Annuel Du Service National: Bulletin No 21-31*, 1942, p. 116), they wrote:

> Our agents have continued to assist in the application of the January 12, 1934 law on Homesteading by promoting its benefits to farmers, inspecting submitted lands to provide information on their state of cultivation, and recommending useful and economical plants that should be planted to enable applicants to obtain their definitive property titles. Unfortunately, those who are meant to benefit from the law are still in small numbers due to requirements that they cannot always meet, and only 14 plots have been inspected in the district of Jacmel, one in the district of Miragoâne, and seven in the district of Jérémie.

The Service claimed it was trying to help the program succeed by recruiting potential homesteaders. In fact, President Vincent felt recruitment was one of the biggest barriers to program expansion (Vincent, 1938, pp. 220–221). But, according to the Service, the barrier was not promotion, it was that the number of beneficiaries was too small. The potential homesteaders could not satisfy the requirements of homesteading.

Looking at the requirements in Table 1, there are four that are likely candidates for a barrier to homesteading: (1) the tenant must be current on payments, (2) the tenant must reside on the property, (3) the property must pass an inspection that it was actually cultivated, and (4) 50% of the property must be planted in an export commodity. We examine each requirement and conclude that the most likely barrier was the requirement to cultivate 50% in an export commodity.

From the aggregate statistics, we are confident that there was a significant share of tenants current on payments. Figure 1c shows that the fraction of rent recovered in 1933 was 52% and the fraction recovered the year before was 42%. Since the total was less than 100%, one could argue that the two groups might not overlap and there were no tenants who were current on payments. But the case against that scenario is weakened by Figure 1d, which shows that backpay surged in 1933, amounting to 15% of the rents due that year. If we assume no overlap across the two years, but also assume the backpay was a subset of those who paid in 1933, there should still be over 4,000 tenants who qualified for a homestead, more than five times the number of homesteads granted. But realistically, the people who pay rent in one year are likely the ones who pay in the next year too, so we can take the 42% as a rough lower-bound of the number of tenants who were current. This would push the number of qualifying tenants to over 12,000. Being current on payments is unlikely the requirement that is not being met.

One requirement that is hard to judge is the need to reside on the plot for two years. We have no data to inform us on these patterns. We do, however, have a statement after the 1932 law was passed that suggests that living on the land was common. When lamenting the loss of transfer rights, the official said,

> Accordingly, there can be little hope that Haitians will apply for homesteads and in time become actual owners of the land they expect to cultivate. Meanwhile, there remain the thousands of hectares of fertile land belonging to the state and **occupied by state tenants who have little or no prospect of ever owning the land they dwell upon**. These tenants will continue to treat the land with the same indifference that they have shown in the past. **Instead of permanent dwellings there will be the usual make-shift huts**... (Haiti Bureau du representant fiscal, 1932, pp. 27–29, emphasis added)

This official believed that the tenants were living on the land and building homes. Since they said there were thousands of hectares in this condition, it seems like the residence requirement was not a problem either.

The requirement to pass an inspection could not have been the prohibitive requirement either because most properties were not inspected. In the above excerpt, the National Service noted that it had only inspected 22 plots, which means that 99% of tenants were not even making it to the inspection phase.

Thus, the final requirement, that 50% of the land be planted in an export commodity, seems the most likely candidate. Indeed, before saying that few properties could meet the requirements, the excerpt also says that the Service was, "recommending useful and economical plants that should be planted to enable applicants to obtain their definitive property titles." The definitive property title (*titre définitif*) is a legal term used in the text of the 1934 law. According to the law, the definitive title would bare the crop the owner was obligated to grow. Failure to keep this obligation could lead to the state revoking the homestead title. Moreover, the law named the National Service of Agricultural Production, the author of the excerpt, as the authority that would decide which crops were attached to each title. The most likely crop would be coffee since it was Haiti's main export and comprised 70-80% of the total value of exports, though it is possible another crop could have been chosen to diversify output. Thus, this appears to be evidence that the government was requiring the homesteaders to grow certain crops but few were willing to invest in them.

While the occupation officials objected to the 1932 law's prohibition on alienating the property, why did they overlook this requirement that seems just as restrictive? There are two possible reasons. First, the law's language says the government "may" require the homestead to plant a certain crop, not that it was a universal requirement. The occupation officials may have underestimated how much the requirement would be enforced. Second, the officials may not have had a problem with the requirement because it was consistent with the occupation's goals. The officials complained that without titles, "instead of coffee trees or cotton plantations [i.e. export commodities] there will be the usual ill-kept plots of corn and vegetables where peasant farmers, without the pride or incentive which comes with private ownership, will continue simply to eke out a bare living from the soil as tenants of the state" (Haiti Bureau du representant fiscal, 1932, pp. 27–29). Since they hoped the homesteads would orient themselves towards export crops, they may not have seen this as a binding constraint.

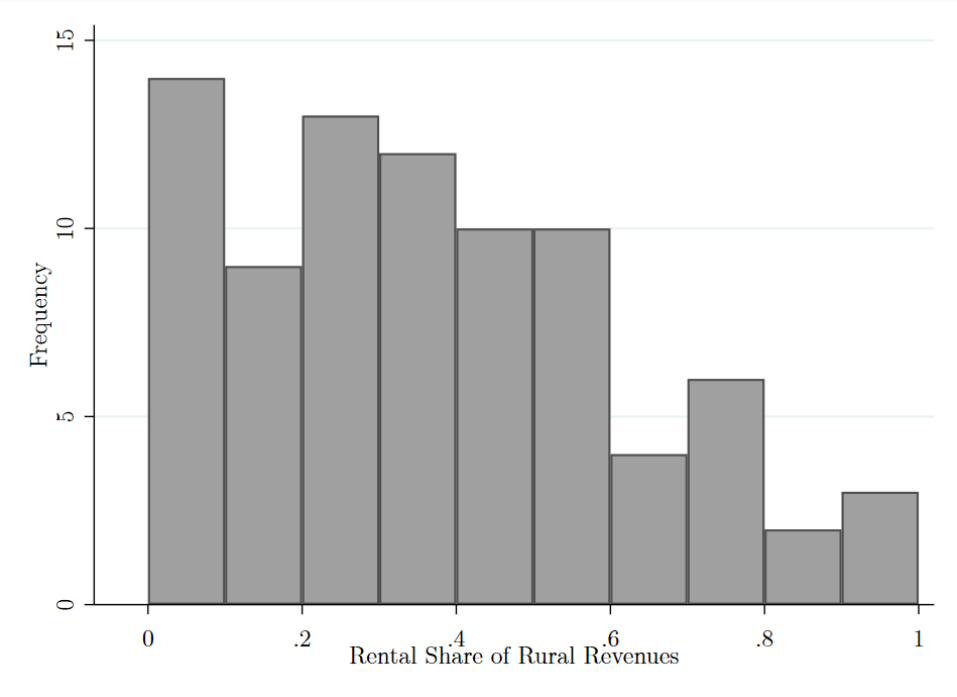
Indeed, an extension survey conducted in Haiti in the early 1950s shows that coffee was a high-revenue crop. The statistical service surveyed 100 homes on their agricultural practices for one of their crops. It mostly focused on subsistence crops (corn, millet, potatoes, yams, rice, and beans), but it surveyed 24 households on coffee cultivation, 18 of which fit the size of the homesteads. Across the 18 coffee farms, households produced 530 lbs. of coffee per hectare. In

1934, Haiti was exporting coffee at about 0.5 HTG per lb. (Haiti Bureau du representant fiscal, 1934). Thus, a homestead planting 2.5 ha in coffee (50% of the maximum plot size) could expect to make 663 HTG, significantly more than the average rent of 19 HTG. On the other hand, growing subsistence crops produced little revenue. Two common subsistence crops were corn and rice. According to the extension survey, households could expect to produce 1,307 lbs. of corn per hectare and 1,450 lbs. of rice. In 1934, Haiti was exporting corn at 0.05 HTG per lb. and importing rice at 0.12 HTG per lb. (Haiti Bureau du representant fiscal, 1934). That means subsistence crops on 2.5 ha could yield 163 to 435 HTG in revenue. While this was enough to cover the rent, it was only 25-66% of what coffee could make.

If producing coffee could generate so much revenue, why would the requirement to plant coffee be such a deterrent to homesteaders? There are several reasons. First, coffee trees are an investment that take years before they become profitable. A tenant without long-run guarantees might not be willing to make that investment. This is confirmed by the extension survey. The survey tracked how long the coffee farms had been operating, and not a single one was younger than 5 years old. Furthermore, of the 100 households surveyed, 20 were tenants, and none of them produced coffee. Second, the investment also required capital that a subsistence farmer on rented land likely did not have. Even if the credit market was complete, securing a loan would have required a title to the land that the farmer could not get until after the crops were cultivated. Third, the human capital needed to cultivate, harvest, and market cash crops was different from subsistence crops. Finally, coffee came with risks that would have threatened the title. Coffee prices and output varied significantly from year to year, enough so that some officials worried that planters would tear down trees and switch to subsistence crops (Haiti Bureau du representant fiscal, 1931, p. 12). But tearing down trees would risk forfeiting the title. Coffee was a long-term, risky investment, and before the farmer experimented, he needed complete property rights. Thus, the government and the tenant were stuck in a perverse equilibrium: the government did not want to give a title without the tenant planting coffee, but the tenant did not want to invest in coffee without a title.

It is curious that the government would continue to enforce the commodity export requirement when it was handicapping the program. One reason to keep it might be because the government wanted compensation for the lost revenue. While revenues from property rentals were small

Figure 7. Share of Rural Revenues from Land Rentals



Notes: Distribution of land rental revenues as a share of all revenues collected at the district level between 1925 and 1931.

relative to total government revenues, they were important for funding collectors' salaries, and revenue shortfalls threatened their jobs. "Due to the fact that there are many districts in which receipts are so sparse that it is not possible to pay local agents adequate salaries for their collection, the Internal Revenue Service is still considerably handicapped in getting honest and efficient local officers" (Haiti Bureau du representant fiscal, 1933, p. 129). Many districts got a significant share of local revenues from land rentals, as shown in Figure 7. For one third of districts, land rentals provided over half of the revenue. Furthermore, since homesteading required the tenant to be current on rent, converting a rental into a homestead meant losing the most dependable sources of revenue. Requiring the homestead to produce export commodities could cover the lost rental revenue.

State-owned land had four ways of generating revenue. First, the land could be rented and return, on average, 19 HTG. Second, the land could be converted to a homestead, which would sacrifice the rental revenue, and produce coffee, which would gain tariff revenue. Assuming similar

production from the extension survey and the duty rate in 1934 of 0.30675 HTG/kg (Haiti Bureau du representant fiscal, 1934, p. 56), the coffee produced on 2.5 ha would have generated 147 HTG in tariffs in 1934, nearly 10x what the rental price was bringing. Third, the land could be converted to a homestead and produce subsistence crops, but since Haiti did not have a land tax, this would have generated effectively zero government revenue. Even though it eliminated government revenue, it would be welfare enhancing for the homesteader and seems better than leaving the land idle. But idle state-owned land creates a fourth revenue opportunity: the option to generate future revenue through leases or homesteading. Once the property is homesteaded, the government exercises its option and either gets the stream of tariff revenue or gets nothing.

Thus, the Haitian homesteads are an example of two important property rights problems. First, they demonstrate wealth-destroying private property rights (Leeson & Harris, 2018). Since the government is only the residual claimant on some uses of the land, it destroys the opportunity to create higher social welfare by preventing homesteaders from deciding the optimal use of their land. Second, the homesteads demonstrate the property rights gap, where governments grant property with incomplete rights to retain control over the population (Albertus, 2021). This is highlighted not only in requiring the farmers to plant certain crops, but it was also prevalent in the original act of 1932. In that act, the government did not grant transfer rights, retaining control of the property, and the law's preamble stated the purpose of the homesteads was to prevent a rural exodus. The government wanted to control the land and the people.

Conclusions

In this paper, we examine a titling program in Haiti. While the Haitian program overcomes many of the problems in previously studied programs, it still failed to achieve any significant progress, granting fewer than 700 titles over the first 16 years. We find no evidence that the program was hurt by insufficient benefits, high administrative costs, or political concerns. Our preferred explanation is that the institutional design created onerous restrictions where the government required homesteaders to cultivate cash crops before receiving the title.

One lesson from this program is that the success of titling programs is sensitive to program design. Program design frequently focuses on the incentives for receiving a title, ensuring the property rights guaranteed by the title are better than informal rights. But programs should also

consider whether the restrictions on titles will inhibit the program's success. Some restrictions can benefit the titles. For example, America's homesteading program restricted settlers to surveyed areas that had been selected to minimize the costs of enforcing property rights (Allen, 1991). While a restriction, this did not destroy the program's efficacy. In this paper, the requirement to cultivate cash crops seems like it should not cause problems since cash crops generated high revenues, but the barriers to growing these crops before having a title were enough to render the program ineffective. Future research should explore the trade-offs behind program design and which features help or harm titling.

Another interesting area for future research is to look at the difference between Haiti's two homestead programs. While the second program gave nearly complete rights to the owner, the first program gave a title without transfer rights. Using more detailed records on rental payments, one could estimate the value of the two sets of rights by looking at how tenants responded to the two programs. This would reveal how people value the security of ownership separate from the value of transferring the property.

References

Adamopoulos, T., & Restuccia, D. (2014). The Size Distribution of Farms and International Productivity Differences. *American Economic Review*, *104*(6), 1667–1697.

Agyei-Holmes, A., Buehren, N., Goldstein, M., Osei, R., Osei-Akoto, I., & Udry, C. (2020). The Effects of Land Title Registration on Tenure Security, Investment and the Allocation of Productive Resources: Evidence from Ghana. *Policy Research Working Paper;No. 9376. World Bank*.

Albertus, M. (2021). *Property Without Rights: Origins and Consequences of the Property Rights Gap*. Cambridge University Press.

Ali, D. A., Collin, M., Deininger, K., Dercon, S., Sandefur, J., & Zeitlin, A. (2014). The Price of Empowerment: Experimental Evidence on Land Titling in Tanzania. *Policy Research Working Paper; No. 6908. World Bank, Washington, DC*. https://openknowledge.worldbank.org/handle/10986/18770

Allen, D. (1991). Homesteading and Property Rights; Or, "How the West Was Really Won." *Journal of Law and Economics*, *34*(1), 1–23.

Banque nationale de la Republique d'Haiti. (1941). *Annual Report of the Fiscal Department for the Fiscal Year October 1940–September 1941*.

Bolhuis, M., Rachapalli, S., & Restuccia, D. (2021). *Misallocation in Indian Agriculture* (No. w29363; p. w29363). National Bureau of Economic Research. https://doi.org/10.3386/w29363

Boone, C., Dyzenhaus, A., Manji, A., Gateri, C. W., Ouma, S., Owino, J. K., Gargule, A., & Klopp, J. M. (2019). Land law reform in Kenya: Devolution, veto players, and the limits

of an institutional fix. *African Affairs*, *118*(471), 215–237. https://doi.org/10.1093/afraf/ady053

Bromley, D. W. (2009). Formalising property relations in the developing world: The wrong prescription for the wrong malady. *Land Use Policy*, *26*(1), 20–27. https://doi.org/10.1016/j.landusepol.2008.02.003

Chari, A., Liu, E. M., Wang, S.-Y., & Wang, Y. (2020). Property Rights, Land Misallocation, and Agricultural Efficiency in China. *The Review of Economic Studies*, *88*(4), 1831–1862. https://doi.org/10.1093/restud/rdaa072

Chernina, E., Dower, P. C., & Markevich, A. (2014). Property rights, land liquidity, and internal migration. *Journal of Development Economics*, *110*, 191–215.

De Janvry, A., Emerick, K., Gonzalez-Navarro, M., & Sadoulet, E. (2015). Delinking Land Rights from Land Use: Certification and Migration in Mexico. *American Economic Review*, *105*(10), 3125–3149.

de Soto, H. (2000). *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. Basic Books.

Deininger, K., Ali, D. A., Holden, S., & Zevenbergen, J. (2008). Rural Land Certification in Ethiopia: Process, Initial Impact, and Implications for Other African Countries. *World Development*, *36*(10), 1786–1812. https://doi.org/10.1016/j.worlddev.2007.09.012

Dye, A., & La Croix, S. (2013). The Political Economy of Land Privitization in Argentina and Australia, 1810-1850: A Puzzle. *Journal of Economic History*, *73*(4), 901–936.

Dye, A., & La Croix, S. (2020). Institutions for the taking: Property rights and the settlement of the Cape Colony, 1652–1750. *The Economic History Review*, *73*(1), 33–58. https://doi.org/10.1111/ehr.12817

Ferrero, M. (2021). Accidental socialism: A natural experiment in Haiti 1796–1820. *Journal of Institutional Economics*, *17*(3), 393–409. https://doi.org/10.1017/S1744137420000491

Field, E. (2007). Entitled to Work: Urban Tenure Security and Labor Supply in Peru. *Quarterly Journal of Economics*, *122*(4), 1561–1602.

Galiani, S., & Schargrodsky, E. (2010). Property rights for the poor: Effects of land titling. *Journal of Public Economics*, *94*, 700–729.

Goldstein, M., & Udry, C. (2008). The Profits of Power: Land Rights and Agricultural Investment in Ghana. *Journal of Political Economy*, *116*(6), 981–1022.

Haiti Bureau du representant fiscal. (1928). *Annual Report of the Financial Adviser-General Receiver for the Fiscal Year October 1927–September 1928*.

Haiti Bureau du representant fiscal. (1929). *Annual Report of the Financial Adviser-General Receiver for the Fiscal Year October 1928–September 1929*.

Haiti Bureau du representant fiscal. (1931). *Annual Report of the Financial Adviser-General Receiver for the Fiscal Year October 1930–September 1931*.

Haiti Bureau du representant fiscal. (1932). *Annual Report of the Financial Adviser-General Receiver for the Fiscal Year October 1931–September 1932*.

Haiti Bureau du representant fiscal. (1933). *Annual Report of the Financial Adviser-General Receiver for the Fiscal Year October 1932–September 1933*.

Haiti Bureau du representant fiscal. (1934). *Annual Report of the Fiscal Representative for the Fiscal Year October 1933–September 1934*.

Heller, M., & Salzman, J. (2021). *Mine!: How the Hidden Rules of Ownership Control Our Lives*. Doubleday.

Honig, L. (2017). Selecting the State or Choosing the Chief? The Political Determinants of Smallholder Land Titling. *World Development*, *100*, 94–107.

Hornbeck, R. (2010). Barbed Wire: Property Rights and Agricultural Development. *Quarterly Journal of Economics*, *125*(2), 767–810.

Kuntu-Mensah, P. (2006). On the Implementation of Land Title Registration in Ghana. *S.n.*

Leeson, P. T., & Harris, C. (2018). Wealth-destroying private property rights. *World Development*, *107*, 1–9. https://doi.org/10.1016/j.worlddev.2018.02.013

Millspaugh, A. C. (1929). Our Haitian Problem. *Foreign Affairs*, *7*(4), 556–570.

Murray, G. (1977). *The Evolution of Haitian Peasant Land Tenure: A Case Study in Agrarian Adaptation to Population Growth* [PhD Thesis]. Columbia University.

Murtazashvili, I., & Murtazashvili, J. (2015). Anarchy, self-governance, and legal titling. *Public Choice*, *162*(3–4), 287–305. https://doi.org/10.1007/s11127-014-0222-y

Naidu, S., Robinson, J. A., & Young, L. E. (2021). Social Origins of Dictatorships: Elite Networks and Political Transitions in Haiti. *American Political Science Review*, *115*(3), 900–916. https://doi.org/10.1017/S0003055421000289

Nickow, A., & Kumar, S. (2021). Mobilizing for Entitlement: A Randomised Evaluation of a Homestead Land Rights Initiative in Bihar, India. *The Journal of Development Studies*, *57*(1), 45–69. https://doi.org/10.1080/00220388.2020.1762864

Palsson, C. (2021a). Small Farms, Large Transaction Costs: Haiti's Missing Sugar. *Journal of Economic History*, *81*(2), 513–548.

Palsson, C. (2021b). State Capacity, Property Rights, and External Revenues: Haiti, 1932–1949. *Working Paper*.

Palsson, C. (2023). The Forces of Path Dependence: Haiti's Refugee Camps, 1937–2009. *Explorations in Economic History*, *89*.

Panman, A., & Gracia, N. L. (2022). Titling and beyond: Evidence from Dar es Salaam, Tanzania. *Land Use Policy*.

Rapport Annuel du Service National: Bulletin no 21-31. (1942).

Renaud, R. (1934). *Le regime foncier en Haiti*. Paris: Domat-Montchrestien.

Republic of Haiti. (1920). *Report of the Fourth Fiscal Period Haitian Customs Receivership Fiscal Year 1920*. Government Printing Office.

Supplice, D. (2014). *Dictionnaire biographique des personnalités politiques de la République d'Haïti (1804-2014)*.

Turits, R. L. (2003). *Foundations of Despotism: Peasants, the Trujillo Regime, and Modernity in Dominican History*. Stanford University Press.

Vincent, S. (1938). *Efforts et Resultats*. Imprimerie de L'Etat.