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France's Slow Transition from Privatized to Government-Administered Tax Collection: Tax Farming in the Eighteenth Century

The establishment of a centralized government bureaucracy to collect taxes is regarded as one of the essential features of a modern economy. Britain has long been regarded as a pioneer, creating an efficient tax-collecting bureaucracy over the seventeenth and eighteenth centuries. On the other hand, France has been regarded as a laggard, continuing to rely heavily on tax farming. Focusing on the largest of the tax farms, the French Crown's slow transition from privatized tax collection to government administered tax collection is explained as a consequence of its inability to adequately monitor employees and absorb the risk of fluctuating revenues and absence of ready access to the capital markets. Consequently, the French Crown failed to capture significant tax revenues as it headed into a fiscal crisis at the end of the eighteenth century.

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> "Le système financier de l'ancien régime caractérisait par son absence de logique.....Les impôts indirects étaient très nombreux, mais peu productifs, car mal levés selon le désastreux système de la `ferme'." (Godechot, pp. 160-1)

Inequitable and excessive taxation helped to incite the French Revolution. Although historians have most recently focused on other causes of the Revolution, the issue of taxation was a central part of the incendiary debates in the early days of the revolutionary upheaval. Among the institutions of the ancien régime that came under attack, the Ferme Générale or General Tax Farm, was one of the most vilified. Leasing the right to collect the highly unpopular indirect taxes for a profit, the fermiers-généraux or farmers-general were depicted as rapacious and tyrannical. Ultimately, they were guillotined in 1794 for having imposed "toutes espéces d'exactions et de concussions sur le peuple français." (Mousnier, p. 463) Although there were some contemporaries who defended this privatized collection of taxes, historians have almost universally accepted the revolutionaries' verdict of the Ferme as inefficient and corrupt. The purpose of this paper is to re-examine why France did not shift its collection of taxes to salaried government officials and to measure the cost of retaining the tax farm.

To the modern mind, the collection of taxes would seem to be an essential governmental function. However, delegation of tax collection for profit was common in Europe (Bonney 1990). The United Provinces and Prussia made extensive use of tax farms; only Britain began to abandon tax farming in the late seventeenth century (Brewer, 1990). The Ferme Générale is particularly important to study as it was the largest tax farm in Europe, and it was a key fiscal institution of the ancien régime, accounting for well over one third of total royal tax revenues (White, 1989). A basic question arises then, why, given the central importance of maximizing tax revenue, would the French Crown use a privatized system of tax collection?

In the selection of the contractual arrangements for the collection of taxes, the Crown faced a classic "principal-agent" problem. Tax yields varied from year to year with economic fluctuations, but revenues might also fall short if the Crown did not devise appropriate incentives to motivate its tax collectors. Like any government, the ancien régime monarchy had a choice of three basic forms of contract that offered different

incentives: (1) The government could pay a fixed wage to its tax collectors in return for delivery of all revenue from a tax, (2) The tax collectors could pay a fixed rent to the government for the right to collect a tax and keep the remaining revenue, or (3) The government could lease the right to collect a tax to a tax collector for a share of the revenue. Some of the factors affecting the choice of contractual form would have included the technology of tax collection, the ability of the government to monitor the tax collectors, and the degree of risk aversion exhibited by the government and its tax collectors (Stiglitz, 1974 and 1987).

In the modern world, governments almost exclusively pay the employees of their tax collecting bureaucracies a fixed wage or salary to collect taxes. If the task of collecting taxes is well known and collection can be cheaply monitored, a fixed wage is an appropriate incentive to motivate employees. They will receive payment of wages if they perform their task but will not be paid if they fail to do so. However, modern tax collecting bureaucracies may be less than efficient, if the government has less than perfect information about the best methods to collect taxes and it cannot effectively monitor the actions of its tax collectors.

For the collection of indirect taxes, the French monarchy did not choose a state-run salaried bureaucracy. Instead it leased the right to collect taxes to a syndicate for a fixed number of years. The development of the contract between the Crown and the fermiers généraux from 1726 to the Revolution can be roughly characterized as a shift from a rental contract to a rental plus revenue sharing contract to a mixed fixed wage plus rental and revenue sharing contract. The changing character of the contract governing the Ferme Générale and the debate over the form of the contract largely reflected the increasing ability of the Crown to monitor the tax collectors and to accept the risks of tax collection. Thus, while early in the century it may have been reasonable to allow the fermiers to collect a substantial fraction of the revenues as payment for absorbing the risks, it seemed to many to be an anachronistic waste by the end of the century. The presumption of critics of the Ferme in the last half of the eighteenth century was that the government failed to use its the available information in setting tax collection contracts, leaving great wealth to fall into the laps of the fermiers. Although the benefits from more efficient tax collection appeared to accrue to the syndicate rather than the Crown or its subjects, many ministers bargained hard with the Ferme or imposed a variety of profit sharing requirements that increased royal

revenues. Nevertheless, many critics believed that the monarchy did not go far enough to garner all potential revenue by terminating the Ferme and instituting a salaried bureaucracy. A key factor constraining the Crown's choices was its limited access to capital markets, which could have allowed a smoothing of revenue flows thereby permitting it to accept the risks inherent in fluctuating tax revenues.

Origins of the Eighteenth Century Ferme

At the beginning of the eighteenth century, the collection of royal taxes was delegated to private syndicates rather than a bureaucracy. There were two basic forms of contract governing compensation and risk. In a ferme or tax farm, a syndicate promised to pay a fixed rent for the bail or the lease of the right to collect taxes. The fermiers assumed the risk for any variations in revenue and obtained as profit any revenues above the lease price. Alternatively, in a régie, the members of a syndicate--the régisseurs--were paid some fixed compensation or salary for the collection of taxes with the Crown accepting the risk that revenues would fluctuate. In practice, contracts were more complicated, but a key question of public finance administration in the eighteenth century was which of these two basic forms was preferable.

The collection of indirect taxes--perceptions--was traditionally performed by fermes.[1] Over the course of the previous century, this activity had been largely centralized in the Ferme Générale. While changes in tax administration were often slow, the collapse of John Law's System offered the Crown an opportunity for reform. In an effort to raise much needed revenue for the Treasury, the new controller-general Le Pelletier de la Housaye sought to sign a better contract with the ferme. To the government's proposal of a six year lease, the financiers offered a bail of 40 million livres for the first two years and 44 million for the remainder. This offer was rejected as the Ferme had yielded a minimum of 52 million under Law (Matthews, 1958, p. 71).

Discouraged by these efforts to create a new ferme, the Crown signed a contract to form a régie with 40 financiers in 1721. Each régisseur received a salary 18,000 livres per year. To guarantee delivery of the tax revenue, they provided a caution or security bond of

[1] Direct taxes were managed by a régie, the Receveurs Généreaux. Determined by fixed schedules, they had fewer monitoring problems and less risk.

5,600,000 livres (140,000 livres each) on which they received 5 percent interest annually. In 1723, the régie was converted into a régie interessée to provide additional incentives to raise revenue. In this modified régie, the régisseurs were be paid a bonus of one sous on every livre (5 percent) collected above a revenue of 57 million livres and would pay a penalty of two sous per livre (10 percent) below that sum. Monitoring and strict accountability were hard to maintain and the régisseurs gained a reputation for rapacity and greed. In spite of any losses to corruption, the receipts from the tax rose rapidly from 61 million in 1721 to 91.5 million in 1725 (Matthews, pp. 71-5).

Disappointed by the performance and reputation of the régie, Louis XV's chief minister, Cardinal Fleury, dissolved it in 1726. In its place, the Ferme Générale was revived, and the bail Carlier was signed on August 19, 1726. The forty fermiers généraux who signed this contract, included most members of the régie. They contracted to pay an annual lease price of 80 million livres for six years for the right to exploit the ferme. They posted a caution or bond of 8 million livres reimbursable at the expiration of the contract (Matthews, p. 76). Although modified in many dimensions, this basic contract governed the Ferme Générale until the Revolution.

In 1726 the Ferme Générale comprised the receipts of the gabelles (the salt monopoly), the traites (customs duties), the aides (sales taxes) and the domaines (the king's seignorial rights and registry taxes). In 1730 the Ferme leased the Ferme Générale des Tabacs (the tobacco monopoly) from the Compagnie des Indes, paying a lease price to the Compagnie until 1747 when it reverted to the state. There was a further concentration in the bail Henriet of 1756 when the sous-fermes of additional aides and domaines, which had been farmed to 27 other companies of sous-fermiers, were rolled into the Ferme Générale (Matthews, p. 191 and Durand, p. 51). Together these five sources of revenue comprised the bulk of the Ferme's business. The last major changed occurred in 1780 when the Crown removed the aides to an independent régie-général des aides and the domaines to an independent administration-générale des domaines, leaving the Ferme with the gabelles, tabacs, and traites. These two new agencies were régies intéressées. However, some aides, notably the important entrées de Paris (municipal sales taxes) were left in the Ferme, while some new rights including the exploitation of the royal forest (eaux, bois, et fôrets) were

added to the domaines. In 1783, the traites were also placed in a régie, but the fermiers served as the régisseurs (Matthews, pp. 78-80).

The Lease and Governance of the Ferme Générale

The key characteristics of the eleven contracts or baux for the Ferme Générale are presented in Table 1.[2] Each contract was known by the name of the ajudicataire or lead member of the syndicate (Etrennes financières, 1789, pp. 38-39). In addition to signing a lease with the Crown, the fermiers signed an acte de société-générale. This contract established or re-established the Compagnie des Fermiers Généraux as a partnership with unlimited liability and collective responsibility. The agreement set down the advances, the reimbursement of expenses, the fermiers' costs and other details (Durand p. 52-3). Each fermier contributed an equal share of capital and had an equal voice in all financial and administrative decisions, as well as an equal share of the profits.

To manage the ferme's business, assemblées or committees (16 in 1763) were created. Each fermier sat on four or five committees simultaneously and rotated among them every two years. The most important committee was the assemblée des caisses, filled with the most experienced fermiers. On each committee, the most influential tax farmers were the correspondent fermiers who managed the committee's business and correspondence with provincial offices. They effectively ran the operation of the Ferme, while the remaining members were to varying degrees active or passive investors (Matthews, pp. 191-203 and Durand, p.53).

Sometimes a fermier would designate an adjoint in the lease. The adjoint was not a partner in the syndicate but served in the fermier's place. Most often adjoints were sons or nephews who were compensated according to the discretion of the fermier. Nomination as an adjoint guaranteed the person the right to succeed the fermier upon his death (Matthews, p. 245).

[2] For a more detailed description, see White (1996).

Table 1

Leases of the Ferme Generale

Bail	Year	Annual Lease Price (livres)	Advances to The Crown (livres)	Number of Fermiers
Carlier	1726	80,000,000	8,000,000	40
Desboves	1732	84,000,000	8,000,000	40
Forceville	1738	91,830,000	8,000,000	40
La Rue	1744	92,000,000(peace)	8,000,000	40
	1748	91,153,000 (war)		
Girandin+	1750	104,265,000	20,000,000	40
Henriet++	1756	110,000,000	60,000,000	60
Prevost	1762	124,000,000(peace)	72,000,000	60
	1764	118,000,000(war)		
Alaterre	1768	132,000,000	92,000,000	60
David	1774	152,000,000	92,000,000	60
Salzard*	1780	122,900,000 (prix rigorereux) 126,000,000 (prix espere)	62,400,000	40
Mager**	1786	144,000,000 (prix rigorereux) 150,000,000 (prix espere)	65,520,000 68,840,000	42 44

* Lease for only the gabelles,tabacs, traites and entrees de Paris
** Lease for only gabelles, tabacs and entrees de Paris
+Upon Girandin's death Bocquillon began the adjudicataire.
++Subfarming eliminated
Sources: Matthews, The Royal General Farms, Etrennes financieres.

The bail was not sold at auction; and the lease price was set by a process of negotiation with a well-established syndicate. There was virtually no competition for this monopoly. I have only found one example of an alternative syndicate placing a bid. In 1737, a hitherto unknown company offered to farm the tabacs separately for 10 or 11 million livres annually. The minister in charge of the negotiations with the Ferme, Cardinal Fleury, was chagrined at this upstart competitor, but did respond by raising the contract price for the tobacco contract from 8 to 11 million livres (Price, p. 362). Entry into the business of tax collecting was difficult as Adam Smith (1776) pointed out because the capital required was enormous and the skills to operate the whole ferme were hard to acquire outside of the established syndicate. Competition might limit excess profits, but potential fermiers would find it to their advantage to combine as partners. Smith argued that the resulting collusion would then deprive the state of the full rental value of the farm.

Critics, like Montesquiou (1748) and Bandau (1763), denounced the excessive profits the fermiers gained from the contracts. Darigrand (1763) called for the abolition of the Ferme Générale, and the anonymous author of Le secret des finances divulgué (n.d.) saw a large financial benefit for the Crown if it dissolved the Ferme. On the other hand, recognizing the importance of incentives, supporters of the Ferme argued that the fermiers managed their affairs better than régisseurs because of their direct financial interest (Durand, p. 68). Adam Smith (1776, p. 853) was dubious about this claim. He had no doubt that "the best and most frugal way of levying a tax can never be by farm." Recognizing that a sharecropping contract was inferior to a rental contract, Smith concurred that the fermiers must always receive a profit proportional to the risk taken and the skill in managing the enterprise over and above their expenses. However, he concluded it is "almost always exorbitant" and a government which establishes its own tax bureaucracy will save this profit.[3]

Many of these negative views are echoed by modern historians, although they consider tax farming as problematic for diverse reasons. As the introductory quotation shows, Godechot felt that tax farming was an inefficient and politically dangerous system.

[3] Smith (p. 856) concluded simply: “The French system seems, in every respect, inferior to the British.”

Detailing the close family networks among the fermiers who were part of the financial elite, Brugiere (1986, p. 33-34) concluded they had milked the system to build up huge fortunes. Sedillot (1987, p. 236) did not believe that the Ferme administered taxes incompetently but judged that it committed abuses. Commenting on the profits of the David lease, Matthews (p. 269) considered the contract to be the product of "a wasteful obsolete system, borne in the last analysis by the taxpayer." Aftalion (1987, pp.29-31) argued that the tax farmers were hated because they appeared to benefit enormously from the collection of taxes and the high rates of interest on loans to the state. Yet, he offered no opinion on whether the profits from tax farming were excessive. Most recently, Bonney (1999, p. 156) concluded that the tax farm was a system that "seemed out of control and carried too high an overhead cost."

Surety Bonds and Loans

Central to the functioning of the Ferme and its relations with the Crown was its credit operations. The operation of the Ferme Génerale required substantial financial, physical and human resources to collect taxes. The syndicate provided the financial capital and the management skills in recruiting and organizing the labor while the Crown was the nominal owner of the physical capital in addition to the right to the tax farm.

The financial capital required by the fermiers consisted of the caution demanded by the Crown and the working capital needed for the operation of the ferme. Originally the caution provided by the fermiers was a straightforward guarantee for the performance of their tasks. As seen in Table 1, the caution was unchanged in the first four baux at 8 million livres, paying 4 percent interest. This bond was liquidated by a deduction of 8 million livres from the last annual lease price. The Compagnie's total capital--its caution plus working capital was 33.8 million livres for Girandin lease (Lavoisier, Oeuvres, VI, p. 136 and Matthews, pp. 249-251). If the Compagnie needed some short term financing, it could issue billets de fermes. The billets were negotiable money market instruments issued directly by the fermiers on their personal credit.

The Crown's financial problems in the third quarter of the eighteenth century led it to demand larger cautions, not as surety bonds but as loans, and to obtain credit from the fermiers by increasing the issue of billets de fermes. In the bail Girandin/Bocquillon of

1751 the bond demanded rose to 20 million livres and then to 60 million livres for the bail Henriet on the eve of the Seven Years War in 1756.[4] During the monarchy's financial crisis of 1759, a decree was issued on November 21, 1759 temporarily suspending payment of the billets des fermes and the rescriptions of the Receveurs Généraux as part of the general default of the Crown. In the 1762 bail Prevost caution of 72 million livres was set to repay the fermiers' caution of the bail d'Henriet. Although there was a schedule of deductions from the annual lease price to liquidate this debt in six years, the Crown was only able to manage a partial reimbursement (Lavoisier, p. 137-9).

For the bail Alaterre of 1768, the Crown demanded an increase in the caution to 92 million livres. The fermiers were alarmed and concerned that royal finances might again require another suspension of payments and hoped to obtain some guarantees. However, on February 18, 1770, an indefinite suspension of payment of the billets de fermes was decreed. The following November, the Crown decreed that these notes would be gradually retired at a rate of 3.6 million per year, using the profits of the Ferme. This arrangement produced struggle between the king and the fermiers over the terms of the bail David of 1774. Although not settled to the satisfaction of the fermiers, the caution remained at 92 million with a promise to reimburse 20 million livres during the term of the lease (Lavoisier, pp. 141-3).

The caution for the bail Salzard was kept at 92 million livres, and the outstanding billets totalled 16,135,000 livres. Pressed by expenditures on the American war, the finance minister Jacques Necker restructured the Ferme. He split off the aides and domaines creating 25 new offices to administer each. These 50 new offices required a total bonds of 50 million livres. The number of fermiers généraux were reduced from 60 to 40, but their individual bonds of 1,560,000 livres remained the same yielding a total caution from the Ferme of 62,400,000 livres. Necker thus obtained 112.4 million livres from the 90 financiers which allowed him to reimburse the 20 retiring fermiers their 31.2 million livres and raise the Crown's long-term credit from 72 million to 81.2 million livres (Matthews, pp. 253-9). The new lease also included an orderly payment of the billets. In the subsequent bail Mager, the number of fermiers was raised to 42 and then 44, adding to the total caution.

[4] In 1751, the subfarming companies supplied an additional 7,883,000 livres. Matthews, p. 231.

Few actual or potential fermiers could supply a caution of as high as 1.5 million livres. To raise capital, a fermier could borrow money by personal note at rates of 6 to 7 percent or as high as 10 to 12 percent. One method to raise capital was to divide a place in the syndicate into croupes--from one half to one-eighth. A croupier was a sleeping partner who provided part of the investment and shared in the profits but had no voice in the affairs. Sometimes, the Crown used a croupe or a pension as a devise to tax the fermiers. In 1774, 38 of the 60 fermiers had croupiers and 55 were required to pay pensions. This informal method of taxing the fermiers led to abuse. When a list of all croupes and pensions for the bail David was published in 1776, the public was scandalized to discover that the king, Mme. de Pompadour, and Mme. du Barry were croupiers (Matthews, pp. 232-7 and Mousnier, p. 447).

The collection of taxes required a large investment in physical capital--toll gates, warehouses, offices, and ships. While the syndicate built, maintained and used the physical capital, it was the property of the Crown. The erection of a new wall around Paris illustrates this relationship. Smuggling substantially reduced the Ferme's collection of the entrées de Paris. The fermier Antoin-Laurent Lavoisier suggested that the whole city be enclosed by a continous wall. The proposal was approved by the Crown and construction was begun in 1783. The fermiers supervised and financed the construction of the wall, and the treasury paid for it by deductions from the lease price (Matthews, pp. 172-3 and Durand, p. 49).

Personnel and Policing Powers

Collection of taxes requires coercion, and the great variety of indirect taxes across the numerous jurisdictions required a large, carefully supervised labor force. Until the bail Henriet, each fermier had offices in his private hôtel, paying his own commis and secretaries. The limited central administration of the Ferme was in the Hôtel des Fermes on the rue de Grenelle-Saint Honoré, near Saint-Eustache. In 1756, the operations of the fermiers-généraux were consolidated in the Hôtel des Fermes, with with annexes at the Hôtel de Longeville on the rue Saint-Thomas for tobacco and the Hôtel de Bretonvilliers at the end of the island of Notre-Dame, which held the bureaus for aides and papier timbré (Mousnier, pp. 453-4). By 1774, this central administration had 685 employees, and the whole Ferme had 28,762 employees. Almost two decades later, Lavoisier estimated that

there were approximately 30,000 employees. To manage this large labor force, unified rules and regulations were issued. Safeguards, in the form of surety bonds for senior officials, were required and a retirement system was begun (Durand, pp. 53-6).

The state delegated its coercive police powers to the syndicate. In the exercise of their authority to collect taxes, the fermiers acquired the reputation of being thorough if not ruthless. The ferme was permitted to arm its employees and put ships out on the seas and rivers. A commis of the ferme had the power to freely search the homes of nobles, ecclesiastics and bourgeois; and in the exercise of this power, they were under the protection of the King, his judges, officials, and intendants. Furthermore, the Ferme was empowered to search soldiers for contraband. Resistance to the commis were regarded as acts of rebellion (Durand, p. 50).

Enforcement of the salt monopoly required the exercise of enormous coercive powers. Given very high fixed prices for salt, with substantial differentials between regions, salt smuggling was ubiquitous. To enforce the monopoly and police other taxes, the Ferme relied on its milice financière. This paramilitary corps of guards, largely occupied with salt smuggling, numbered over 20,000 in the last twenty years of the Ferme. They had almost unlimited and arbitrary right of search and seizure. The milice used armed force freely and sometimes engaged in pitched battles with smugglers. Salt smugglers also faced a separate court, and brutal punishments were meted out. As late as 1783, over two hundred men were condemned to the galleys for smuggling (Matthews, pp. 107-14).

The extraordinary police powers delegated to the Ferme angered the populace, and critics fumed. Darigrand (1763) was infuriated by what he regarded as the usupation of the state's police power and its abuse by the employees of the Ferme:

> L'on voit par ces exemples que la seule régie des Aides est destructive de toutes les loix, de toute liberté, de toute autorité, de toute police et de toute equité. Le souffle empoisonne que s'exhale du fond de l'Hotel des Fermes se repand sure toute la France et infecte tout. Il ne s'en faut plus que du pain et de l'eau pour que les financiers ayent corrompu toutes les sources de la vie." (p. 51).

In his Mémoires, one former tax farmer, François-Nicholas Mollien looked backed at the tax farm as an extraordinary burden on the nation. With its 30,000 employees, he deplored:

> une telle armée était elle-même un impôt bien lourd; mais elle était la conséquence nécessaire de cette diversité des taxes, surtout de cette variation de tarifs qui rendaient en quelque sort la plupart des provinces française étrangères l'une à l'autre (p. 66).

Recognizing the problem inherent in any share cropping arrangement, Adam Smith also believed that tax farming for profit created an additional problem because the fermiers were harsher than any sovereign in punishing evasion, fraud or smuggling (p. 854):

> The farmers of public revenue never find the laws too severe, which punish any attempt to evade the payment of a tax. They have no bowels for the contributors who are not their subjects, and whose universal bankruptcy, if it should happen the day after their farm is expired, would not much affect their interest.

According to Smith, the farmers were far harsher than any sovereign. The syndicate willingly used its ample coercive powers even at the risk of spoiling the king's property. Anticipating, their revolutionary critics, he excoriated the farmers as opulent nouveaux riches, whose wealth and vanity incited public indignation (1776, p.854).

Revenue, Expense and Profits

The income of the fermiers produced by this system was the subject of considerable speculation. Fantastic earnings were report by Mirabeau (1761), Darigrand (1763), and other detractors. Yet, some parts of their income were fairly well known to contemporaries. The earnings of a fermier were composed of three elements: a managerial salary, interest paid on his share of the caution, and his share of profits from the lease. The salary of each fermier beginning with the bail Carlier was 24,000 livres plus an expense account of 4,200 livres (Lavoisier, p. 158). By 1775, a fermier's share of the caution, 1,560,000 livres, earned 10 percent on the first million and 6 percent on the remainder or 133,000 livres per year. Until 1780, these were paid for by the Ferme, and afterwards by the king who provided a salary of 30,000 livres and interest of 5 percent (Matthews, p. 263). These earnings would, of course, be shared with any croupiers or private creditors.

What was the subject of real debate were the entrepreneurial profits of the Ferme. A definitive appraisal of the operations of the Ferme requires a complete set of summary

financial records. Unfortunately, what remains is mostly fragmentary records, and more or less informed speculations. Thus, according to Lavoisier (pp. 133-5), the total profit from the bail Carlier from 1726 to 1732 was approximately 25 million livres, while others have claimed that it earned as high as 60 million (Matthews, p. 267). Lavoisier's estimate of 25 million would have represented an average annual profit of over 100,000 livres per fermier. To this sum should be added the 24,000 livres salary, 4,200 of expenses and 20,000 livres of interest for a total income of 148,200 livres. Unfortunately, there is little information about the costs of a fermier, Lavoisier lumped together the cost of payment of a commis, secretaries, maintenance of a house and family to estimate a cost of 52,000 livres per year. Staffing probably cost 20,000 to 30,000 livres per year for a fermier.[5] Assuming that caution plus working capital totalled 33.8 million, or 845,000 livres per fermier, as did under the Girandin lease and staffing cost 25,000 livres, the return was a modest 15 percent. Lavoisier's insider estimate contrasts the claim of 60 million which would have yielded a profit of 278,200 per fermier and, after costs, a return of 36 percent. For a Crown unable to administer its own bureaucracy, paying 4 to 10 million per year to receive 80 million seemed outrageous to many.

The most thorough historian of the Ferme, Matthews (1958, p. 263) believed that there were no extant figures reporting its profitability available to the eighteenth century public, nor were any preserved. In spite of Matthews' pessimism, the summary records of the first four years of the bail Henriet (1756-1760) are available in the archives.[6] This lease included more taxes than previous ones, and the coverage remained unchanged until 1780. Table 2 presents the revenues, expenses and profits of the bail d'Henriet by each major farm. The salaries of the fermiers are included in other costs, which were termed "appointments, remises et frais." Profits were far from steady, and annual net income for the Ferme ranged from 16.8 million livres to 800,430 livres. The risk of tax collection is evident here with a big drop in the third year. Occurring during the Seven Years War, the decline is evident for almost all tax farms; but the biggest drop of 22 percent were in the receipts from the tobacco monopoly when shipments from America fell and prices rose.[7]

[5] A commis received 12,000 to 15,000 livres and secretaries considerably less. (Matthews, p. 213).

[6] Price apparently made limited use of this data.

[7] British imports from American also declined in 1759, and the price of Maryland

Table 2

Bail Henriet (1756-1762)
Revenues, Expenses and Profits
First Four Years
(livres)

	First Year	Second Year	Third Year	Fourth Year
Revenues				
Grandes Gabelles	32,252,980	32,328,757	31,476,174	30,809,517
Petites Gabelles	12,432,598	12,412,758	12,037,037	11,921,168
Cinq Gross Fermes	14,509,003	15,052,629	13,795,115	15,412,469
Entrees de Paris	8,640,763	9,742,661	7,750,646	9,489,546
Tabac	32,412,906	33,422,316	26,059,079	28,748,020
Aides	22,454,862	22,575,391	20,283,847	22,438,997
Domaines Regies	15,728,046	17,724,283	18,164,504	17,578,531
Other farms	14,124,622	14,455,473	13,320,029	13,886,506
Lease Income	152,555,780	157,713,268	142,886,554	150,285,754
Other Income	4,142,429	4,254,143	4,079,616	4,275,685
Total Income	156,698,209	161,967,411	146,966,170	154,561,439
Expenses				
Grandes Gabelles	3,926,569	4,282,378	4,172,378	4,492,695
Petites Gabelles	1,458,011	1,227,450	1,216,888	1,198,220
Cinq Grosses Fermes	2,825,011	2,780,086	2,666,284	2,557,862
Entrees de Paris	444,088	477,397	435,162	445,402
Tabac	4,085,722	4,067,733	3,849,891	3,824,176
Aides	3,513,799	3,514,782	3,420,015	3,471,685
Domaines regies	1,825,696	2,487,459	2,380,474	2,201,598
Other farms	1,325,279	1,259,671	1,026,695	1,121,018
Total	19,404,326	20,097,046	19,168,311	19,312,656
Other Costs	12,931,668	15,411,749	16,997,428	16,773,454
Total Expenses	32,335,994	35,508,795	36,165,739	36,086,110
Rente en Derniers Clairs	120,219,875	122,204,473	106,720,815	114,199,643
Net Total Income	124,362,215	126,458,616	110,800,430	118,475,329
Bail	110,000,000	110,000,000	110,000,000	110,000,000
Profit	14,362,215	16,458,616	800,430	8,475,328
Profit Per Fermier	227,972	261,248	12,705	134,529

Source: Archives Nationales G^{1} 54 ^{B} Bail d' Henriet, Etat de produits bruts, apointments et frais et regie.

tobacco rose from 1.29 to 2.05 pence per pound, Historical Statistics, pp. 1189-90 and 1198. See also Clemens (1980) for data on the rise in the price of Maryland tobacco: 1755, 1.45 pence per pound; 1756, 1.75; 1757, 1.80; 1758 2.40; 1759, 2.65 and 1760, 2.00.

Although the bail officially stated that there would be 60 fermiers, the Alamanch Royale for 1759 listed 63 fermiers. The profit per fermier in the last line of the table is based on this number. Clearly tax collection, especially in war was a risky enterprise when profits could shrink from 261,248 livres in year two to 12,705 livres in year three. This variation probably explains why when the next lease was negotiated there was one lease price of 124 million for peacetime and another of 118 million for wartime. Working capital apparently came out of the issue of billets de ferme permitting the fermier an opportunity for leverage. Average income, after salary, expenses and interest on the caution, less costs, would have ranged between 360,000 and 115,905 or returns of 36 percent and 12 percent. These figures would be further reduced by the presence of croupes or pensions imposed by the king. However, these were suppressed in 1759 (Lavoisier, p. 159).

Expenses in Table 2 provide a measure of collection costs. Total expenses (excluding "other costs") as a share of total income averaged 12.6 percent for these four years. It is hard to provide some metric to determine whether this was high. One comparison is with the U.S., a young country, presumably having learned some lessons from British finance. For the years 1800-1805 (Report of the Secretary of the Treasury, 1801-1807), collection costs as a ratio of gross revenue averaged just under 4 percent. It is difficult to compare this cost to French costs. U.S. revenue was raised primarily from import duties. In France, the salt taxes (the Grandes Gabelles and the Petites Gabelles), which required an army to police smuggling, had costs of 13.3 and 10.4 percent. Yet, the sales taxes (aides) cost 15.9 percent. Only the entrees de Paris had collection costs of 5 percent. Transit taxes collected as goods entered Paris, this tax may most closely resemble U.S. import duties. If so, the costs were similar, suggesting that the French were not necessarily inefficient.

Unfortunately, less precise figures exist for the remaining baux. Lavoisier (p. 139) estimated the average profit for a fermier to be 332,000 livres for the bail Prevost 1762-1768. Including other income and interest less cost, the return on this lease would have been 447,200 livres or 37 percent.[8]

[8] Interest on the first 100 million livres of the caution was 10 percent and 6 percent on the remaining 12 million. Acte de Societe des Interesses du Bail de Jean-Jacques Prevost (1762).

Although lacking in some details, there is important information in a confidential memoire, Calculs de produits de differents baux de la Ferme Generale, prepared by Lavoisier for his colleagues during the contentious negotiations for the bail David in 1774. According to Lavoisier (p. 146), the average average revenue for the last two years of the bail Prevost and the first four years of the bail Alaterre was 179,843,051 livres—well above the revenue from the bail Henriet that averaged 154 million livres. However, the first four years of the Alaterre lease (1768-1772) had produced an average loss of 1,547,976 livres.[9] The total earnings of a fermier would have then averaged about 115,000 livres. This income would have been further reduced by the pensions of 409,000 and the croupes of 1,250,000 livres imposed by the Crown on the Ferme (Lavoisier, p. 158) If they had been borne equally, a fermier's income would have been 87,000 livres or a return of 5.7 percent.

Lavoisier's highly detailed report should have alarmed his fellow fermiers. The controller-general, the abbé Terray suggested that revenues would rise to 199 million and costs would be 47 million, providing the lease price of 152 million as the difference. Nevertheless, the fermiers managed to squeeze out more revenue. For the bail David, one contemporary estimate (Delahante, p. 149) put a fermier's average earning from profits during these six years at 156,000 livres. Combined with the fermiers other income, each would have earned 291,000, a healthy recovery from the previous lease. Another contemporary, François-Nicholas Mollien (pp. 67-8), estimated that the total income from all sources for a fermier of the bail David was 300,000 livres per year. These similar estimates suggest a return of 20 percent.

Although subject to considerable fluctuation, the fermiers managed to produce a good return even as the Crown tried to capture "excess" profits. The government's method was first to tax the fermiers. In 1748, a 10 percent tax was levied on the profits and salaries of the fermiers généraux (Price, p. 370). An aggressive finance minister Silhouette made an unsuccessful attempt in 1759 to take 50 percent of the profits. During the financial crisis of 1770, the abbé Terray raised the tax to 30 percent, making it retroactive to the beginning of the lease. When the new lease was negotiated in 1774, the government moved from taxing the fermiers' income to revenue sharing. An arrêt gave the government 50 percent of the

[9]On revenue of 179 million, the Ferme had costs of 53 million plus the lease of 132 million, leaving a loss of 6 million (Lavoisier, p. 148).

revenue on the first 4 million livres above the lease price, 40 percent on the next 4 million, 30 percent on the subsequent 4 million and 20 percent on any further revenue (Price, p. 370-1).

The finance minister, Jacques Necker decided to take a bigger bite of the profits when he negotiated the bail Salzard in 1780. According to Necker, the total profit from the bail David was 55.5 million livres of which the king received only 13.5 million because of Terray's sliding scale of revenue-sharing. Necker took the 122.9 million livre lease price offered by the Ferme as only the minimum lease price or prix rigorereux. The compagnie would then receive 2 percent on any profits up to 126 million--the prix éspéré. Beyond this sum, half the profits would be retained by the syndicate and half would be taken by the government. The minister was very pleased with himself as he regarded this as a decidedly superior contract to the bail David (Vol 3, pp. 160-1).

Under the bail Salzard, the fermiers would receive 5 percent on the first million livres of the bond and 7 percent on the next 560,000 livres for a total of 89,200 livres in interest. A fermier's salary was set at 30,000 livres, expenses 3,600 livres and interest on the caution was lowered to 5 percent (Etrennes financières, p. 43; Harris, 147-8). The total profits of the bail Salzard were reported to be 45,960,000 livres, which after the government took its half, left 95,667 livres per year per fermier. Total income---182,267 on 1.56 million livres of capital produced a yield of 12 percent. Although some figures exist for the revenue from the last lease, the bail Mager, there are apparently no records or estimates of the profits. The only estimate is the absurdly high anticipated profits of 24,600,000 for 1788.[10]

[10]Each of the 44 fermiers would have earned approximately 560,000 livres. Matthews, pp. 269-271.

Table 3

Fermier's Profits and Returns

Bail	Years Covered	Average Annual Income per Fermier (livres)	Return (Percent)
Carlier	1726-1732	123,000	15
Henriet	1756-1760	238,000	24
Prevost	1762-1768	447,000	37
Alaterre	1768-1772	87,000	6
David	1774-1780	291,000	20
Salzard	1780-1786	182,000	12

The estimates of profits and returns calculated above are summarized in Table 3.[11] Although there is a huge divergence of opinion about the Crown's ability to capture revenue generated by the Ferme, there is some evidence that it kept pace as tax revenues increased. There were swings in profitability of the Ferme, but except possibly for the bail Prevost, the fermiers profits did not soar. Afterwards, the Crown appears to have begun to squeeze profits out of the fermiers, however they continued to earn a very healthy rate of return.

The Evolving Contractual Arrangements

Why was change in the system of tax collection so slow and the criticism so virulent? The theory of share-cropping argues that if the Crown had been able to costlessly monitor the honesty and efficiency of its tax collectors, it would have been preferable to pay tax collectors a wage. The Crown could have assumed all the risks of fluctuations in tax revenues and it could have gained the highest expected revenue. While most developed

[11] Price (p. 373) provides some additional limited data on the receipts and profits of the tobacco farm from 1728 to 1788. As gross receipts rose from 12.5 million to 51.1 million livres, the lease price increased sufficiently that the "apparent book profit" to the fermiers ranged over the whole period between 2.14 and 2.25 million. However, many contemporaries remained skeptical about the true profits, believing that much was hidden in the accounting methods of the fermiers.

countries governments today certainly cannot perfectly monitor their tax collecting bureaucracies, they are able to watch and discipline them at a relatively low cost.

A pure revenue-sharing contract would yield less expected revenue to the government, as it would share some of the risk with the tax collectors. Under a pure rental contract, the government would receive an even lower expected, fixed payment; as all the risk would be borne by the tax collectors who would be compensated for accepting it. As neither the revenue-sharing nor the rental contract would require direct monitoring of the collectors, this reveals that the choice of these contracts was driven in part by the inability of the government to monitor its agents. The experiment and failure of the post-Law régie (it had only a small 5 percent revenue sharing element) and the contemporary comments on the alleged dishonesty and greed of the régisseurs shows the Crown's low capacity to monitor. Consequently, the Crown abandoned a pure wage contract. A fixed salary remained a part of all the subsequent leases, but it was a relatively minor part of total compensation. For example in the bail David, wages accounted for only 7.6 percent of a fermier's income.

The inability to easily monitor tax collecting left the ancien régime to rely on the two other contractual forms. A revenue-sharing contract, with a higher expected revenue, would appear to have been preferable in 1726,[12] The answer why the Crown instead chose a rental contract for the bail Carlier seems to be that the Crown was relatively weak and unwilling to bear much risk. For a fixed and certain revenue of 80 million livres, the government was satisfied to let the fermiers obtain the additional income for bearing all of the risk.

Why was the Crown unable to bear more risk? Part of the answer lies in the limited market for French government debt after the collapse of Law's system. The Crown might have been able to bear the fluctuations in tax revenues, if it could have borrowed in years of tax shortfalls and retired the debt in when revenues revived. After 1721, even if it did find credit, the default following Law raised the cost of borrowing for the government; and it could not manage the risk using the market for government debt. Instead, the fermiers were paid to accept the risks of fluctuating tax revenues. The French experience contrasts starkly with Great Britain where the shift from tax farming to a salaried bureaucracy was completed

[12]The same risk sharing opportunity is available by sharecropping or a mix of wages and rents, but a high cost of monitoring may exclude the alternative.

in the early eighteenth century (Brewer, 1990). Although the South Sea Bubble had damaged British credit, the national debt was consolidated and the government had a ready market for short and long term debt. Temporary shortfalls in tax revenues or huge wartime increases in expenditures were covered by borrowing, enabling the Crown to accept the risks of varying tax revenues and increased its tax take. "Tax smoothing" allowed the British Crown to operate an efficient macroeconomic policy, superior to the French policies (See Barro, 1987; Bordo and White, 1991; and White, 2002).

The fixed rental contract for tax collection in France came under attack in mid-century. The timing of these attacks is interesting because the Crown had reached a level of stability. Real tax receipts per capita that had been in decline were rising steadily by the 1730s and the Crown was regaining some access to the capital markets (Hoffman, 1986 and 1994). Now, it appeared that the fermiers were richly benefiting from their willingness to accept the risk that the weakened Crown had shunned. Beginning in 1748, the Crown made a tentative but apparently unsuccessful attempt to impose a 10 percent tax on the profits of the bail Girandin. This tax attempted to capture some of the revenue that the syndicate gained from assuming risk.

Growing stronger, the monarchy displayed an increased resolve to monitor the Ferme. In the early eighteenth century, the Crown 's ministers were excluded from direct oversight in the administration of the Ferme. Colbert had exercised considerable influence but most finance ministers after Law had little authority of the Ferme. Machault had obtained accounts from the Ferme only by stealth and Bertin forced some disclosure. In 1773, Terray demanded to see full accounts but only managed to get limited results (Price, 371). Worse yet, the controllers-general were paid an annual income of 50,000 livres by the compagnie. Turgot refused this pot de vin and donated it to charity and Necker abolished it (Matthews, pp. 203-4). All important company decisions required the signature of the controller, but only Turgot used this power to influence the management. Necker moved further by controlling the selection of correspondents and the composition of the assemblies. The Ferme's autonomy was further reduced by the installation of an agency of the finance ministry in the Hôtel des Fermes and the requirement that an intendant de finance meet with the Assemblée des Caisses regularly. In 1780, the royal treasury's four premiers commis

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Stiglitz (1990), p. 321.

were given powers of audit and inspection over the gabelles, tabacs, traites, éntrées (Matthews, pp. 204-5). Thus, when revenue-sharing contracts were introduced, the Crown had improved its capacity to monitor as would be expected.

The bail David of 1774 already had a modest revenue-sharing element appended to the rent. Necker's bail Salzard of 1780 and the subsequent bail Mager raised the rental price and set a 50 percent share above the prix ésperé. The government was thus moving to absorb more risk. It could have raised the rent even higher, but it was willing to take the risk for a higher expected revenue. These changes in the monitoring and the willingness to assume risk are consonant with the placement by Necker of the aides and the domaines in régies in 1780. These alterations were followed in 1783 by the movement of the traites to a régie, even though they were managed by the fermiers. Perhaps, one error made by Necker was to leave the politically sensitive aides, the éntrées de Paris in the Ferme. Once reconfirmed of its possession of this tax, the Ferme immediately proceeded to redouble its efforts to halt smuggling and vigorously collect the tax by encircling the capital in a wall. Following Necker's fall from power in 1783, there were no more major changes in the contractual forms of tax collection. Movement towards a salaried corps of tax collectors then halted. The failure to pursue further changes, which could generate more royal revenue at a time the deficits were growing, seems surprising.

Yet, the timing of the reforms and their stagnation is striking. Necker who was the architect a shift to more revenue sharing and more fixed rate contracts was also largely responsible for the revival of more direct government borrowing, using debt to finance much of the American War (White, 2002). Following the British example, the French Crown gained an increased potential to "tax smooth" and thereby follow a more efficient fiscal policy. The risk of fluctuations in tax revenue could be managed by borrowing rather than letting the tax farmers absorb the risk, using a fixed rental contract. The halt in the reform of tax collection after 1783 coincided with the beginnings of the fiscal crisis of the Crown, when access to long-term capital markets began to dry up, thus depriving it of a key tool to manage risk.

The failure of reform to move all tax collection to a fixed wage contract was not trivial in terms of lost revenue to the Crown. Had the government been able to switch entirely to a wage contract and obtain most of the profits of the baux, it might have claimed

another 10 to 15 million livres of revenue, or perhaps even 20 million. When the deficit stood at approximately 100 million livres by the mid 1780s, such a loss was not insignificant (White, 1989, Table 1). Profits of the fermiers-généraux of this magnitude at a time of crisis would have indeed been perceived as an affront to the taxpayers.

Conclusion

The general condemnation of the Ferme Générale by the revolutionaries and contemporary historians needs to be tempered. The adoption of a rental contract for the collection of indirect taxes at the beginning of the eighteenth century reflected the difficulties that faced the Crown in monitoring its agents and its aversion to the risks of a shortfall in tax revenues. The increased ability to monitor and accept risk slowly but incompletely moved the Crown to revenue sharing contracts and eventually towards salaried officials. The process was slow and halting, reflecting to a certain degree, the political inertia of the ancien régime. However, reform moved its quickest when the government regained access to the capital market in the 1770s that it had lost after the collapse of John Law's system. The Crown could absorb more risk, if it could borrow during temporary tax shortfalls. When a fiscal and political crisis in the 1780s sharply limited borrowing, reform halted. The consequence of this failure of institutional reform was that the fermiers continued to earn large profits and high rates of return.

In spite of the Crown's regular increases in the lease price of the tax farms and alteration of the contractual arrangements to share part of the profit or tax it, the management of the Ferme proved adept at increasing tax revenues by improving its collection methods. Of the new tax wall and gates surrounding Paris, it was said: "le mur murant Paris rend Paris murmurant." Many of the cahiers de doléances for the Estates General of 1789 demanded the termination of the Ferme Générale (Mousnier, p. 461). The deficit crisis of the ancien regime was met with calls to reform the tax system. Public anger was fueled by the steady flow of profits to the syndicate from the taxpayers. If the Crown had been able to switch to a completely government run system of collecting indirect taxes, it might have gained enough revenue to reduce the royal deficit by 10 to 20 percent--the deficit that forced the king to call the Estates General in 1789.

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