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From privatized to government-administered tax collection: tax farming in eighteenth-century France[1]

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> The financial system of the *ancien régime* was characterized by an absence of logic. . . . The indirect taxes were excessive in number and yielded little, as they were collected by the disastrous system of tax farming.[2]

Popular perception that taxation was inequitable and excessive helped to incite the French Revolution.[3] 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 'all manner of exactions and extortions from the French people'.[4] Although there were some contemporaries who defended this privatized collection of taxes, historians have almost universally accepted the revolutionaries' verdict that the Ferme was inefficient and corrupt.

To the modern mind, the collection of taxes would seem to be an essential governmental function, but delegation of tax collection for profit was common in Europe.[5] The United Provinces and Prussia made extensive use of tax farms; only Britain began to abandon tax farming in the late seventeenth century, creating a highly productive bureaucracy of salaried officials. The Ferme Générale is particularly important as a subject of study as it was the largest tax farm in Europe; and it was a key fiscal institution of the *ancien*

[1] For many useful comments and suggestions, I thank the economic history seminar at Rutgers University, the Fourth Conference of the European Historical Economics Society, Cormac Ó'Gráda, and two anonymous referees.

[2] Godechot, *Les Institutions*, pp. 160–1.

[3] It is well known that the total tax burden in France was lower than in Britain. For example, Weir, 'Tontines', pp. 96–8 reports that the ratio of taxes to GNP was 6.8% in France and 12.4% in Britain in 1788. See also, White, 'France and the failure', pp. 64–5. However, taxation in France varied more by region and by class, requiring harsh enforcement and producing considerable hostility to the tax regime.

[4] Mousnier, *Institutions of France*, p. 463.

[5] Bonney, 'State and its revenues', discusses several European states and Brewer, *Sinews of power*, examines the change in Britain.

régime, accounting for well over one-third of total royal tax revenues.[6] Why, then, given the central importance of maximizing tax revenue, would the French Crown use a privatized system of tax collection?

Although the system of tax farming has been often described, it has not been the subject of economic analysis, which provides crucial insights into its rationale and problems. In the selection of the contractual arrangements for the collection of taxes, the Crown faced a principal-agent problem. The principal-agent literature, especially as it has been applied to agriculture, helps to explain the evolution over time of the Crown's choice of contracts and their shortcomings. The three basic types of contracts—rental, share, and wage contracts—are on a linear continuum, with extremes of a pure rental contract and a pure wage contract, where the agent and the principal respectively absorb all the risk.[7] In a rental contract for a tax farm, the tax collectors would pay a fixed rent to the government for the right to collect a tax and keep the remaining revenue; in a share contract, the government would lease the right to collect a tax to a collector for a share of the revenue; and in a wage contract, the government would pay a fixed wage to its tax collectors in return for delivery of all revenue. The intermediate forms of contract are proportional share contracts that can be specified by explicit shares to agent and principal or by a mix of rent and wages. Many agricultural contracts have some mix of these elements.

In the canonical principal-agent model,[8] both the principal and the agent, here the Crown and the tax collector, are assumed to be risk neutral. Output or tax collections were a function of the efforts of the agent, which were unobservable to the principal, and a random variable with mean zero and finite variance, reflecting the fact that tax yields varied from year to year with economic fluctuations and political upheavals that were beyond the control of the Crown and the tax collectors. The terms of the contract represent a trade-off of the incentive effects of a higher output share to the agent against the risk aversion of the agent. Once a contract is accepted, the agent observes the random variable and maximizes expected utility by selecting a level of effort. In the canonical case where both the Crown and the tax collector are risk-neutral, there would be no moral hazard and the optimal contract would be a fixed rent contract where the tax collector obtains all residual output.

In many simple models, the agent is assumed to be risk-averse and the principal risk-neutral. Here, the optimal contract is a share contract that provides some risk sharing and incentives to the tax collector for better performance. If, more realistically, both the agent and the principal are risk-averse and the agent is more risk-averse, a share contract is predicted, while if the principal is more risk-averse, a rental contract is more likely to be preferred. A wage contract may be selected, where all of the risk would be

[6] White, 'Was there a solution?', pp. 545–50, provides further data on the royal budgets.
[7] The fundamental work is Stiglitz, 'Incentives and risk sharing'. See also, Stiglitz, 'Sharecropping'.
[8] Two basic surveys are Sappington, 'Incentives', and Allen and Lueck, 'Risk preferences'.

shifted to the Crown, but the cost of monitoring the collectors to prevent shirking would need to be very low. Risk may also be managed if agents and principals have access to financial markets. An agent with better access to financial markets will be less likely to choose a share contract and more likely to prefer a rental contract. Similarly, better access or more complete financial markets for the principal will permit a shift towards a wage contract.

Other factors affecting the choice of contract move it along the continuum. Economic fluctuations that induce the variability in revenue beyond the control of Crown and tax collector would also influence the choice of contract. If the agent is more risk-averse than the principal, risk sharing implies that greater variance will shift contracts along the continuum away from rental contracts towards wage contracts (the agent's share decreases), and if risk preferences are reversed, then the choice prediction is reversed (the agent's share increases). Wealth of the principal and the agent, as it affects risk aversion, has also been argued to be a determinant of contract choice. When utility is a linear mean-variance function of income with a declining absolute risk aversion, as an agent's wealth increases, the agent's share of output will increase and there will be an increased likelihood of a rental rather than a share contract.

Costs to the principal of supervising or monitoring the agent also play a role. Tax collectors need to be monitored to ensure that they are correctly reporting revenues. Share contracts (and wage contracts) create incentives for an agent to over-report costs and under-report output, making a rental contract more likely when these costs are high *ceteris paribus*. If monitoring costs decline, the choice of contract should shift along the continuum towards a wage contract, as the principal stands to gain additional income from absorbing more risk as long as the incentives are maintained. Like agriculture, tax collection has long-lived assets, the physical capital and the taxable population. A fixed rent contract may induce moral hazard and overuse or squeezing of these 'assets', causing the principal to shift away from this contract. However, there are economies of scope in monitoring employees and the use of capital, and this feature may move the principal towards wage contracts.

Asymmetries in pre-contractual beliefs regarding the variance of revenue and limitations on the ability to commit will also influence the choice of contract. When there is limited liability or asymmetric pre-contractual information, sharing will be induced. If the agent is able to abrogate the terms of a rental contract in the event of a poor outcome, the principal will not lower the fee but will institute sharing. Similarly, if the agent's initial information on output variance is better than the principal's, they will not be able to agree on a rental contract and a sharing arrangement will be offered by the principal. However, when risk aversion, limited liability restrictions or asymmetric information induce sharing, effort will be lower than in the case of a rental contract, with a resultant loss of output.

Having potential agents bid for a contract can identify the best agent and limit the rents. Standard auction theory suggests that a second-price auction will induce agents to bid for their true valuation of the rental contract. By awarding the contract to the highest bidder for a payment equal to the second-highest bid, the principal can ensure that costs are minimized and all rents are extracted. If, once selected, the agent becomes the sole supplier and alternative agents are limited, perhaps because entry has become difficult, the effects of bidding in the next auction may be weakened. Yet, at the same time, if the incumbent fears that the franchise will be forfeited, then he may be reluctant to invest resources to improve future performance. Furthermore, if the duration of a rental contract is limited, the principal may not be able to ensure an average payment for an average performance and the conflict between risk sharing and incentives will re-emerge, inducing a shift away from rental contracts.

Existing histories have traditionally treated the *ancien régime*'s choice of tax collection system as arbitrary and needlessly costly. By way of contrast, the extensive theoretical literature modelling principal-agent relationships provides important insights into how to interpret the choice of contract within a rational framework. However, as the empirical literature on the principal-agent problem in agriculture has found, no one simple model explains the variation in landowner-farmer contracts. There is optimization across the many margins described above, including the relative risk aversion of agent and principal, their relative wealth, the presence of financial markets, double-sided moral hazard, agency problems involving the used of long-lived assets, and monitoring of inputs and outputs.[9] As in the empirical literature, this article uses the many theoretical models to identify the key factors that motivated the choice of contract for eighteenth-century tax collection.

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 (i.e., the government is at no informational disadvantage), collection can be monitored cheaply, and the government can borrow to smooth the fluctuations in revenue, then a fixed wage is an appropriate incentive to motivate employees. By absorbing all of the risk from revenue fluctuations, the wage contract also delivers the highest expected revenue to the government. However, these conditions were rarely attained in the past. For the collection of indirect taxes, the French monarchy

[9] For example, in southern U.S. agriculture, wealth/human capital, risk, crop mix, contractual enforcement and supervision all play a role in explaining the temporal and spatial mix of contracts in Alston and Higgs, 'Contractual mix', and Alston et al., 'Tenancy Choice'. Similarly, in fifteenth-century Italy, Ackerberg and Botticini, 'Choice of agrarian contracts', finds that imperfect capital markets and moral hazard were important determinants of the choice of contract. See also Pudney et al., 'Econometric model', and for France, Hoffman, 'Sharecropping and investment'. Examining modern North American agriculture, Allen and Lueck, 'Risk preferences', sees little support for risk aversion as a factor and much more for moral hazard and enforcement costs.

did not choose a state-run salaried bureaucracy. Instead, it usually 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 farmers-general from 1726 to the revolution can be characterized as a shift along the contractual continuum from a rental contract to share contracts with increasingly higher shares for the government mixed with some wage elements.

Critics of the Ferme in the second half of the eighteenth century contended that the government failed to control it and let great wealth fall into the laps of the tax farmers who extracted taxes with excessive force and harshness. Contrary to this view, this article argues that profits were not 'enormous' and the tough regime reflected the incentives to the Ferme. When ministers of the Crown perceived that the syndicate was growing more efficient and harvesting more revenue, they bargained hard in the negotiations for the next contract with the Ferme. Centralization of the Ferme's management, with improved internal monitoring of its employees, enhanced by extension the Crown's capacity to monitor the tax farm. As its ability to monitor the tax farmers improved, the government imposed a variety of profit-sharing requirements that increased royal revenues. Yet, the Crown's choices appear to have been constrained by its access to capital markets and by politics. In the wake of the collapse of the Mississippi bubble and the government's default, the Crown's reputation as a credible borrower was severely damaged. In the subsequent decades, the monarchy's ability to borrow improved gradually, enabling it to cover fluctuations in expenditures more easily by borrowing. The flexibility afforded by the capital markets permitted the Crown to accept the risks inherent in varying tax revenues, thereby capturing a greater share. Yet, the transition to a salaried bureaucracy slowed and then stopped, as the Crown's weakness as a credible borrower reappeared in the 1780s and a new default loomed. In addition, movement towards a wage bureaucracy alienated the vested interests that profited from the tax farms and they were able to reassert themselves in the 1780s as part of a general reaction of the venal officer class threatened by the Crown's reforms of the 1770s.

I

At the beginning of the eighteenth century, debate on how the kingdom's taxes should be collected focused on whether a *ferme* or a *régie* should be employed. In a *ferme* or tax farm, a syndicate undertook to pay a fixed rent or share of revenue for the *bail* or the lease of the right to collect taxes. The tax farmers thus assumed some or all of the risk for variations in revenue. 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.[10] In practice, con-

[10] Typically, the term *régie* is translated as management or administration, but there is no easy English equivalent for wage-compensated administration.

tracts were more complicated since they represented share contracts of various proportions, but a key question of public finance administration in the eighteenth century was which of these two basic forms was preferable.

Information on locating taxable assets or revenues—the technology of tax collection—in the large and diverse kingdom was a key problem for the relatively small royal government. To manage the informational asymmetry between the monarchy and its subjects on their direct and indirect tax obligations, the Crown used individuals with specialized local knowledge. In the case of direct taxes, a fixed tax obligation was imposed and apportioned among the provinces and their divisions down to the parish level. In each parish, responsibility for payment was collective and parishioners elected their own officials who used their local knowledge to allocate the burden on households.[11] The collection and management of these funds was handled by a *régie*, the Receveurs Généraux. Collective discipline might be imposed on a village to ensure that there was a fair sharing of a fixed tax burden, but the collection of indirect taxes, which involved trade and movement of goods, was more difficult. To monitor the entrepreneurs engaged in commerce, the government found it useful to employ other local entrepreneurs to collect their taxes, establishing tax farms.

Until the mid-seventeenth century, the Crown offered short-term leases for many small tax farms in competitive bidding to local entrepreneurs, who were monitored by local officials.[12] This decentralized system reflected the slow and irregular growth of royal authority and the acquisition of new territory, with different taxes that were sometimes preserved. The Crown resisted the formation of large syndicates of tax farmers, fearing that they would eliminate competition and would corrupt local officials. Although competitive bidding might in theory maximize revenue, the monitoring costs were high; and a weak central government, often struggling against civil disorder, found it difficult to control royal officials and tax farmers.[13] In the face of economic fluctuations, rebellion, plague, and banditry, farmers operating a small farm, collecting one tax in one region, often failed to meet the lease price. Some pleaded for its reduction, and others went bankrupt. The inability of these agents to commit led to share contracts for some taxes. The civil war of the Fronde represented the gravest threat to the Crown. Its ability to monitor officials lessened, its wealth fell, and it may have also become more risk averse—all conditions that would drive a principal to prefer share contracts. Thus, in this extreme situation, the Crown abandoned its *régies* for the basic direct taxes, the *tailles* and the *crues* and farmed them out until the end of the Fronde.

When Jean-Baptiste Colbert took over royal finances in 1661, he responded to these problems with a gradual consolidation of the tax farms

[11] For further information, see Collins, *State in early modern France*.

[12] See Matthews, *Royal general farms*, pp. 35–51.

[13] The tax farmers were leased out in first price bids with a relatively small number of bidders. See Bayard, *Le monde des financiers* for details.

that culminated in the creation of General Farms (*fermes unies et générales*) in 1681. Although he apparently would have preferred *régies* to tax farms, he wanted to use the information and skills of the tax farmers. Rather than attempt to monitor many local officials and tax farmers, Colbert formed a centralized syndicate reporting to the royal council. Instead of competitive bidding, the government bargained a lease price with the syndicate. The pooling of many taxes into a single farm diversified the asset and increased the ability of the tax farmers to commit to a contract. Improved monitoring and some economies of scale in collection which were the result of consolidation yielded significantly more revenue to tax collectors and to the Crown.[14]

The wars of Louis XIV and the consequent economic disruptions produced sharp fluctuations in revenues. A collapse in receipts left the farmers deeply in debt trying to pay the lease price. In 1709, when the government could not reach an agreement with the syndicate, the tax farms were put into a *régie* that lasted until 1714. Attempting to raise revenue, John Law sought a reform of the General Farms, but little was accomplished in the chaos after the collapse of his 'System'. 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 a tax farm. To the government's proposal of a six-year lease, the financiers offered a lease of 40 million livres for the first two years and 44 million for each of the remainder. This offer was rejected on the grounds that the Ferme had yielded a minimum of 52 million under Law.[15]

Given that it expected much more income than the tax farmers would promise, the Crown contracted to form a *régie* with 40 financiers in 1721, thereby accepting the risk of fluctuations in revenue. Each *régisseur* received a salary of 18,000 livres per year, posting individual *cautions* or security bonds of 140,000 livres. Principal-agent theory would have suggested a choice of a share contract rather than a wage contract when there is a sharp asymmetry of opinion. The problems with low yields, enforcement, and monitoring suggest that this was a clear mistake by the Crown, which anticipated better economic conditions and consequently more revenue. Not surprisingly, in 1723, the *régie* was converted into a *régie interessée* to provide additional incentives to tax collectors. In this modified *régie*, the *régisseurs* were paid a bonus of 1 sou on every livre (5 per cent) collected above a revenue of 57 million livres and a penalty of 2 sous per livre (10 per cent) below that sum. Le Pelletier de la Housaye had correctly forecast that tax receipts would rise when the economy eventually recovered, but collecting the revenue proved much more difficult than anticipated. The

[14] Johnson, *Banking on the king*, explains the consolidation of the farms as an effort by the tax collectors to establish a countervailing force and prevent the king's default on debts owed to them. This alternative interpretation minimizes Colbert's efforts to generate more revenue for the Crown and enhance the power of the state.

[15] Matthews, *Royal general farms*, p. 71.

régisseurs were hard to monitor and gained a reputation for rapacity. The finance minister, Joseph Pâris-Duverney, tried to establish close supervision, imposing new accounting rules; but the tax collectors increased their take at the government's expense by inflating costs and hiding the true state of revenues in a bewildering maze of subcontracts that left the Crown in the dark. Monitoring was hampered further by the alleged widespread corruption of royal officials abetted by the mistress of the regent.[16] By 1726, the use of a *régie* to collect indirect taxes was discredited.

II

The scandal and apparent failure of the government to capture more revenue led Louis XV's new chief minister, Cardinal Fleury, to dissolve the *régie* in 1726. In its place, the Ferme Générale was revived, and the Carlier lease was signed on 19 August 1726. The 40 farmers-general contracted to pay an annual lease price of 80 million livres for six years for the right to exploit the Ferme. They posted a total bond of 8 million livres, earning 4 per cent and reimbursable at the expiration of the contract. Although modified in many dimensions, this basic contract governed the Ferme Générale until the revolution.

Several key characteristics of the 11 contracts for the Ferme Générale are presented in table 1.[17] The steadily increasing value of the contracts to the Crown is shown by the present discounted value of the contract at 4 per cent (the yield on the first *caution*). Each contract was known by the name of the *ajudicataire* or lead member of the syndicate. In addition to signing a lease with the Crown, the farmers signed a contract establishing the Compagnie des Fermiers Généraux as a partnership with unlimited and joint liability. The agreement set down the advances, the reimbursement of expenses, and other details. Each farmer 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.[18] 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); and to these the *tabac* (the tobacco monopoly) was added in 1730.

After signing a six-year contract, the financially strapped Crown sometimes regretted the lease price that had been agreed. Initially, it sought to capture more revenue by levying taxes on the farmers. In 1748, a 10 per cent tax was imposed on their profits and salaries. An aggressive finance

[16] Ibid., pp. 71–5.

[17] For a more detailed description, see White, 'La efficacité de l'affermage de l'impôt'.

[18] Sometimes a farmer would designate an *adjoint* in the lease. The *adjoint* was not a partner in the syndicate but served in the farmer's place. Most often *adjoints* were sons or nephews who were compensated according to the discretion of the farmer. Nomination as an *adjoint* guaranteed the person the right to succeed the farmer upon his death: Matthews, *Royal general farms*, p. 245.

Table 1. *Leases of the Ferme Générale*

Lease	*Year signed*	*Annual lease price (livres)*	*Advances to the Crown (livres)*	*Present value at 4% (livres)*	*No. of farmers*
Carlier	1726	80,000,000	8,000,000	436,145,786	40
Desboves	1732	84,000,000	8,000,000	457,953,076	40
Forceville	1738	91,830,000	8,000,000	500,640,845	40
La Rue	1744 (peace)	92,000,000	8,000,000	501,567,654	40
	1748 (war)	91,153,000		496,949,961	40
Girandin[a]	1750	104,265,000	20,000,000	568,434,255	40
Henriet[b]	1756	110,000,000	60,000,000	599,700,456	60
Prevost	1762 (peace)	124,000,000	72,000,000	676,025,969	60
	1764 (war)	118,000,000		643,315,035	60
Alaterre	1768	132,000,000	92,000,000	719,640,548	60
David	1774	152,000,000	92,000,000	828,676,994	60
Salzard[c]	1780	122,900,000 (minimum price)	62,400,000	670,028,964	40
		126,000,000 (expected price)		686,929,614	40
Mager[d]	1786	144,000,000 (minimum price)	65,520,000	785,062,416	42
		150,000,000 (expected price)	68,840,000	817,773,350	44

Notes: *a* upon Girandin's death Bocquillon began the *adjudicataire*;
b subfarming eliminated;
c Lease for only the salt and tobacco monopolies, the customs, and Paris customs;
d Lease for only the salt and tobacco monopolies and the Paris customs.
Sources: Matthews, *Royal tax farms; Etrennes financières*

minister, Silhouette, made an unsuccessful attempt in 1759 to take 50 per cent of the profits. Then, during the financial crisis of 1770, the abbé Terray set the tax at 30 per cent, making it retroactive to the beginning of the lease. Whether this policy reversal was a result of the Crown having different expectations about the value of the lease or whether it represented an inability to commit, theory points out that there should be a shift from a rental to a share contract. And finally, the Crown abandoned attempts to change the terms of the lease. When a new lease was negotiated in 1774, the government added an element of revenue sharing to the rental contract. Under the David lease, the government received 50 per cent of the revenue on the first 4 million livres above the lease price, 40 per cent on the next 4 million, 30 per cent on the subsequent 4 million, and 20 per cent on any further revenue.[19] According to the finance minister, Jacques Necker, the total profit from the David lease was 55.5 million livres, of which the king received 13.5 million on Terray's sliding scale of revenue sharing.[20]

[19] Price, *France and the Chesapeake*, pp. 370–1.
[20] Necker, *Oeuvres complètes*, 3, pp. 160–1.

When Necker negotiated the Salzard lease in 1780, he sought to capture more revenue, changing part of the lease to a fixed-wage contract and increasing the revenue-sharing element. The *aides* were removed to an independent *régie-général des aides* and the *domaines* to an independent *administration-générale des domaines*, so that the Ferme then comprised the salt and tobacco monopolies and customs duties. These two new agencies then became *régies intéressées*, part rental, part revenue-sharing contracts.[21] Necker took the lease price of 122.9 million livres offered by the Ferme as the minimum lease price. He determined that tax farmers would then receive 2 per cent of any profits up to the expected price of 126 million. Beyond this sum, half the profits would be retained by the syndicate and half would be taken by the government. In the last major change before the revolution, the customs duties were also placed in a *régie* in 1783, with the farmers serving as the *régisseurs*.[22] Thus, the contract with the Ferme had evolved from what was in essence a rental contract to one where several indirect taxes were collected by officials paid a fixed wage and the remaining taxes operated under a mixed rental/revenue-sharing arrangement. Unlike its rival across the Channel, the French Crown made a limited transition to a salaried bureaucracy of tax collectors.

Critics levelled two general charges against the Ferme: first, the high price paid by the Crown for its services and second, the alleged brutality of its collection methods. They claimed that the lease price, set by a process of negotiation, was far too low, leaving large profits in the hands of the farmers. Although bidding for tax farms had been competitive in the mid-seventeenth century, once the centralized monopoly was established, entry was difficult. As Adam Smith pointed out, the capital required was enormous and the skills to operate the tax farm were hard to acquire outside the established syndicate.[23] Entry could have been eased by breaking up the monopoly, but the Crown was unprepared to tackle the monitoring problems that had induced Colbert to centralize the Ferme. The ministers of the Crown did not encourage outside bids, and I have found only one example of an alternative syndicate placing a bid. In 1737, a hitherto unknown company offered to farm the tobacco monopoly separately for 10 or 11 million livres annually. Negotiating with the Ferme, Cardinal Fleury ignored this upstart competitor but responded by raising the price for the tobacco contract from 8 million to 11 million livres.[24] Given the difficulty of entry, Smith pointed out that potential farmers would find it to their advantage to join the Ferme, maintaining the monopoly and depriving the state of the full rental value of the farm.[25] The absence of bidding from an

[21] However, some taxes, notably the important Paris customs, were left in the Ferme, and some new rights including the exploitation of the royal forests (*eaux, bois, et fôrets*) were added to the *domaines*.
[22] Matthews, *Royal general farms*, pp. 78–80.
[23] Smith, *Wealth of nations*, pp. 854–6.
[24] See Price, *France and the Chesapeake*, p. 362.
[25] To ensure that the Farm would undertake investments in physical capital, the Crown engaged in cost sharing, as predicted by theory.

alternative syndicate made bargaining acrimonious, as the state sought to increase its share of tax revenue while the tax farmers resisted.

Not surprisingly, the popular perception was that the Ferme extracted huge profits at the expense of the populace. Critics, including Montesquieu and Bandeau,[26] denounced the excessive profits to the farmers gained from the contracts. One contemporary wrote:

> I can never pass in front of the Hôtel des Fermes without sighing profoundly. I am reminded how that place swallows up the money violently appropriated from every part of the kingdom, and after a slow and laborious trip it arrives diminished in the coffers of the king. What a ruinous bargain, what a deceptive and disastrous contract the king has signed![27]

In *L'Anti-financier*, Darigrand called for the abolition of the Ferme Générale, and the anonymous author of *Le secret des finances divulgué* saw a large financial benefit for the Crown if it dissolved the Ferme. On the other hand, supporters of the Ferme argued that the farmers managed their affairs better than *régisseurs* because of their direct financial interest.[28] Adam Smith 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'.[29] Smith argued that the tax farmers 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 that it is 'almost always exorbitant' and a government which establishes its own tax bureaucracy will save this profit.

Many of these negative views are echoed by modern historians, although they consider tax farming to be problematic for diverse reasons. As the epigraph to this article shows, Godechot felt that tax farming was an inefficient and politically dangerous system. Although he provided no documentary evidence, Chaussinand-Nogaret considered that the tax farm operated efficiently, generating increased revenue for the Crown.[30] Nevertheless, he was suspicious of the political favouritism shown to the farmers and of the fortunes they amassed. Detailing the close family networks among the tax farmers who were part of the financial elite, Brugière concluded that they had milked the system to build up huge fortunes.[31] Sedillot did not believe that the Ferme administered taxes incompetently but judged that it committed abuses.[32] Commenting on the profits of the David lease, Matthews considered the contract to be the product of 'a wasteful obsolete system, borne in the last analysis by the taxpayer'.[33] Aftalion argued that

[26] Montesquieu, *L'esprit des lois* and Bandeau, *Idées d'un citoyen.*
[27] Quoted in Chaussinand-Nogaret, *Gens de finance*, p. 40.
[28] Durand, *Les Fermiers Généraux*, p. 68.
[29] Smith, *Wealth of nations*, p. 853.
[30] Chaussinand-Nogaret, *Gens de finance*, pp. 40–50.
[31] Brugière, *Gestionnaires et profiteurs*, pp. 33–4.
[32] Sedillot, *La Coût de la Révolution*, p. 236.
[33] Matthews, *Royal general farms*, p. 269.

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.[34] Most recently, Bonney concluded that the tax farm was a system that 'seemed out of control and carried too high an overhead cost'.[35]

But it was not just the reputed loss of revenue that incensed contemporaries. To collect taxes, the state delegated its coercive police powers to the syndicate. In the exercise of their authority to collect taxes, the farmers acquired the reputation of being thorough if not ruthless. The Ferme was permitted to arm its employees and to use ships to patrol the seas and rivers. An agent of the Ferme had the power to search at will the homes of nobles, ecclesiastics, and bourgeois; and in the exercise of this power, these agents were under the protection of the king and his officials. Resistance to an official of the Ferme was regarded as an act of rebellion. Enforcement of the salt and tobacco monopolies required the exercise of enormous coercive powers.[36] Given very high fixed prices for salt, with substantial differentials between regions, salt smuggling was ubiquitous. Collas details the elaborate policing required to guard against smuggling between low and high tax provinces.[37] In spite of severe penalties and tough surveillance, smugglers were organized and aggressive.[38]

To enforce the monopoly and to police other taxes, the Ferme relied on its financial police. This paramilitary corps of guards, largely occupied with salt smuggling, numbered over 20,000 in the last 20 years of the Ferme. They had almost unlimited and arbitrary right of search and seizure. The police 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 200 men were condemned to the galleys for smuggling.

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

> One can see by these examples that even one farm alone, the Aides, undermines all laws, all liberty, all authority, all policing, and all fairness. The poisonous breath exhaled from the depths of the Hôtel des Fermes spreads throughout all of France and infects everything. All that is needed is for bread and water to be added to their list and the officials will have tainted all sources of life.[39]

[34] Aftalion, *L'Économie de la Révolution française*, pp. 29–31.

[35] Bonney, 'State and its revenues', p. 156.

[36] For a discussion of the efforts to enforce the salt and tobacco monopolies, see Bourquin and Hepp, *Aspects de la contrebande*; Durand, *Les Fermiers Généraux*, p. 50; Matthews, *Royal general farms*, pp. 107–14.

[37] Collas, *La Contrebande*.

[38] In one of the few studies of how the Ferme operated locally, Clinquart, *Les Services*, examined its operations in the Généralité of Hainaut, revealing the regional complexity of taxes and collection efforts.

[39] Darigrand, *L'Anti-financier*, p. 51.

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

> This army itself was a heavy tax, but it was the necessary consequence of the diversity of taxes, above all the variation in rates that rendered each province a foreign country to the rest.[40]

Multiple tax jurisdictions with differing tax rates induced smuggling and required harsh policing, independent of the tax farm. However, a central problem in any share contract is that the tenant has little incentive to maintain the underlying value of the capital asset. Although ignored by French historians, Adam Smith was the keenest analyst of the Ferme and correctly identified this problem. Accurately anticipating modern principal-agent theory, he believed that tax farming for profit made the farmers harsher than any sovereign when punishing evasion, fraud, or smuggling:

> 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.[41]

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. This combination of allegedly high returns to the tax farmers and brutal enforcement outraged domestic critics and foreign observers of the fiscal regime. The issue of brutality might have been largely solved by imposing a unified tax rate and limiting the legal authority of the Ferme, but the question of 'excessive' profits would have remained.

III

The profits and returns to tax farming were the subject of considerable speculation. Fantastic earnings were reported in Mirabeau's *Theorie de l'impôt* and by Darigrand's *L'Anti-financier*, and by other detractors. Yet, some parts of the farmers' income were fairly well known to contemporaries. The earnings of a tax farmer were composed of three elements: a managerial salary, interest paid on his share of the bond, and his share of profits from the lease. The first two, spelled out in the leases, were public information; the entrepreneurial profits, private information to the partners, were the subject of the debate. A definitive appraisal would require a complete set of the Ferme's summary financial records. Unfortunately, what survive in the archives are documents that give only a fragmentary picture. One important exception is a confidential memoire, 'Calculs de produits de differents baux

[40] Mollien, *Mémoires d'un ministre*, p. 66.
[41] Smith, *Wealth of nations*, p. 854.

Table 2. *Individual farmers' profits and returns*

Bail	*Years covered*	*Average annual income per farmer (livres)*	*Return (%)*
Carlier	1726–32	119,367	22
Henriet	1756–60	262,314	22
Prevost	1762–8	447,200	25
Alaterre	1768–72	81,750	5
David	1774–80	291,200	17
Salzard	1780–6	193,467	10

Source: Lavoisier, 'Calculs des produits'

de la Ferme Générale', prepared by Lavoisier for his colleagues during the contentious negotiations for the David lease in 1774. An internal memorandum, it provides an insider's report to his fellow farmers about past contracts and current negotiations.

For the first lease—the Carlier lease—Lavoisier reported the profit from the entire six years from 1726 to 1732 to be approximately 25 million livres.[42] Marion speculates that profits totalled 60 million, but this is based on a reported highest year's earnings under the *régie*.[43] Two contemporary estimates put profits at 5 million for 1725 and 9 million for three years, and both of these are in line with Lavoisier's figures. His estimate of 25 million represented an average annual profit of 104,167 livres per farmer. To this sum should be added the 24,000 livres salary, 4,200 livres expenses, and 12,000 livres of interest at 4 per cent on the security bond, for a total gross annual income of 144,367 livres. Unfortunately, there is little information about the individual costs for a farmer. Lavoisier lumped together the cost of payment of a clerk, secretaries, and maintenance of a house and family, to estimate a cost of 52,000 livres per year. A clerk received 12,000 to 15,000 livres and secretaries considerably less.[44] Excluding personal consumption, staffing probably cost 20,000 to 30,000 livres per year for a farmer. Here it is assumed that staffing costs were approximately 25,000 livres. Although this may be on the low side, it will tend to increase slightly the estimate of the return, ensuring that there is no downward bias, so that the claim of exorbitant profits can be tested. Average annual net income is thus estimated to be 119,367 livres, reported in table 2.

To measure a tax farmer's return, an estimate of the capital invested is required. The operation of the Ferme Générale required substantial physical and financial capital, of which part was provided by the Crown and part by the farmers. A large investment in toll gates, warehouses, offices, and ships was necessary; and although the syndicate built and maintained the physical

[42] Lavoisier, 'Calculs des produits', pp. 133–5.
[43] See Marion, *Histoire financière*, pp. 144–5; Matthews, *Royal general farms*, p. 267.
[44] Ibid., *Royal general farms*, p. 213.

capital, it was paid for and remained the property of the Crown.[45] The capital provided by the farmers consisted of the bond demanded by the Crown and the working capital needed for the operation of the Ferme. Originally the farmers' bond was a straightforward guarantee for the performance of their tasks, paid back at the end of the lease. As table 1 shows, the bond was unchanged in the first four leases at 8 million livres. Unfortunately, the only estimate of working capital is derived from Lavoisier's report that the farmers' total capital came to 33.8 million livres during the Girandin lease. Given a bond of 20 million, this implies that working capital was 13.8 million livres.[46]

Working capital could be provided by the individuals or by the Ferme's borrowings. However, borrowing by the Ferme cannot be used as a measure of working capital because that was not its primary function; its central role was to provide financial intermediation for the Crown. The Ferme provided credit by honouring charges in excess of the annual lease price, lending against future payments.[47] It took two forms. *Assignations* were government debts to individuals assigned for payment to the Ferme at a certain time in the future. They could be accepted by the Ferme immediately at a discount. *Billets de fermes* were short-term notes issued by the Ferme to the market to pay for expenses or to provide credit to the Crown. Hence the capital for the Carlier lease is estimated to consist of the 200,000 livres bond for each farmer plus his share of the total working capital. It is not known to what extent the farmers leveraged their investment by borrowing. However, the costs of borrowing by the Ferme are included in its expenses, just as today interest on bonds is included in a firm's expenses, and should not be considered part of a farmer's investment. Assuming that Lavoisier's implicit estimate of 13.8 million livres represents the farmers' personal contribution to working capital, each individual would have contributed 345,000 livres. Total capital invested by a farmer would then be 545,000 livres for the Carlier lease. The annual return with a net pre-tax income of 119,367 livres would have been 22 per cent, which is reported in table 2. Lavoisier's insider estimate, used here, contrasts with the inflated claim of 60 million livres which would have yielded a profit of 265,200 annually per farmer and, after costs, a return of 49 per cent. Obviously, an alleged return of this magnitude would have been resented. For outraged critics, the figure of 60 million livres instead of 25 million meant that for a Crown unwilling to administer

[45] The erection of a new wall around Paris illustrates this relationship. Smuggling substantially reduced the Ferme's collection of the Paris customs. Lavoisier suggested that the whole city be enclosed by a continuous wall. The proposal was approved by the Crown and construction was begun in 1783. The farmers supervised and financed the construction of the wall, and the treasury paid for it by deductions from the lease price. For more details, see Matthews, *Royal general farms*, pp. 172–3; Durand, *Les Fermiers Généraux*, p. 49.

[46] Lavoisier, 'Calculs des produits', p. 136; Matthews, *Royal general farms*, pp. 249–51.

[47] The receipts from particular taxes were often assigned to specific expenditures. Interest payments on the *rentes sur l'Hôtel de Ville* were secured by the receipts of the sales tax farm. The difference between the charges and the annual lease price was the *parti du roi*, or net revenue to the royal treasury: Matthews, *Royal general farms*, pp. 13–15.

Table 3. *Revenues, expenses, and profits for the first four years of the Henriet lease, 1756–62 (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	12,037,160	11,921,168
Cinq Gross Fermes	14,509,003	15,052,629	13,795,115	15,412,469
Entrées de Paris	8,640,763	9,741,661	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	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	4,172,902	4,492,695
Petites Gabelles	1,458,011	1,227,450	1,216,888	1,198,220
Cinq Grosses Fermes	2,825,162	2,780,086	2,666,284	2,557,862
Entrées 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	3,514,872	3,420,015	3,471,685
Domaines	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
Lease price	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 farmer	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 régie, 1762

its own bureaucracy, it appeared to be paying 10 million livres per year instead of 4 million to receive 80 million in annual revenue.

Unfortunately, there appears to be no significant information for the next four leases. The most thorough historian of the Ferme, Matthews, believed that there were no detailed records extant, but a summary of the first four years of the Henriet lease (1756–60) is available in the archives.[48] Table 3 presents the revenues, expenses, and profits of the Henriet lease by each major farm.[49] Profits were far from steady, and annual net income for the

[48] Ibid., p. 263. Price was apparently aware of this data but made limited use of it in *France and the Chesapeake*.

[49] Providing a measure of the collection costs, tab. 3 throws some light on another contentious issue. One comparison is with the US, a young country, presumably having learned some lessons from British finance. For the years 1800–5 (US Department of the Treasury, *Report of the Secretary of the Treasury*, 1801–7), collection costs as a ratio of gross revenue averaged just under 4%. It is difficult to compare this cost with French costs. US revenue was raised primarily from import duties. In France, the salt taxes, which required an army to police smuggling, had costs of 13.3% and 10.4%. Yet, the sales taxes (*aides*) cost 15.9%. Only the Paris customs had collection costs of 5%. These were transit taxes collected as goods entered Paris, and hence this tax may most closely resemble US import duties. If so, the costs were similar, suggesting that the French were not necessarily inefficient.

Ferme ranged from 16.5 million livres to 800,430 livres. The risk inherent in tax collection—typically ignored by critics of the monarchy—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 (22 per cent) was in the receipts from the tobacco monopoly when shipments from America fell and prices rose.[50]

Although the lease officially stated that there would be 60 farmers, the *Almanach Royale* for 1759 listed 63. The profit per farmer in the last line of the table is based on this number. Clearly tax collection, especially in war, was a risky enterprise when annual profits could shrink from 261,248 livres in the second year to 12,705 livres in the third. This variation probably explains why, when the next lease was negotiated, there was one lease price of 124 million livres for peacetime and another of 118 million for wartime. The Crown's financial problems in the third quarter of the eighteenth century led it to demand larger bonds, not as security but as loans. In the Girandin/Bocquillon lease of 1751 the bond demanded rose to 20 million livres, and then to 60 million livres for the Henriet lease on the eve of the Seven Years War in 1756.[51]

Few actual or potential tax farmers could personally put up a bond of as much as 1.5 million livres. A farmer could borrow money by personal note at rates of 6 to 7 per cent or as high as 10 to 12 per cent. Alternatively, he might raise capital by dividing a place in the syndicate into *croupes* or shares—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 device to tax the farmers. In 1774, 38 of the 60 farmers had *croupiers* and 55 were required to pay pensions. This informal method of taxing the farmers led to abuse. When a list of all *croupes* and pensions for the David lease was published in 1776, the public was scandalized to discover that the king, Mme. de Pompadour, and Mme. du Barry were *croupiers*.[52]

Given the same salary, expenses, working capital, costs, and interest now of 10 per cent on the bond (totalling 60 million), net earnings for these four years of the Henriet lease would have ranged from a low of 115,905 for the third year to a high of 364,448 for the second, averaging approximately 262,000 livres. The lowest and highest returns would have been 10 per cent and 31 per cent; the average of the four was 22 per cent. The returns would have been further reduced by the presence of *croupes* or pensions imposed by the king, but these were suppressed in 1759.[53] The

[50] British imports from America also declined in 1759, and the price of Maryland tobacco rose from 1.29d. 2.05d. per pound: US Department of Commerce, *Historical Statistics*, pp. 1189–90, 1198. See also Clemens, *Atlantic economy*, for data on the rise in the price of Maryland tobacco: 1755, 1.45d. per pound; 1756, 1.75d.; 1757, 1.80d.; 1758, 2.40d.; 1759, 2.65d.; 1760, 2.00d.

[51] In 1751, the sub-farming companies supplied an additional 7,883,000 livres: Matthews, *Royal general farms*, p. 231.

[52] Ibid., pp. 232–7; Mousnier, *Institutions of France*, p. 447.

[53] Lavoisier, 'Calculs des produits', p. 159.

fact that the average return was greater than 20 per cent, as it was for the Carlier lease, may have induced the finance minister to impose a tax of 10 per cent on farmers' incomes in 1748 in an effort to capture some of the 'lost' tax revenues.

Unfortunately, less detailed information has survived for the remaining leases. Lavoisier estimated the average annual profit for a farmer to be 332,000 livres for the Prevost lease of 1762–8 where the bond was raised to 72 million livres. Using these figures, a farmer's net earnings would have averaged 447,200 livres for each year of the lease, implying a return of 31 per cent.[54] If this high rate of return had been persistent, it explains why (leaving aside the financial difficulties of the Crown) the finance minister sought a 50 per cent tax on the farmers' incomes. For the Alaterre lease, the Crown demanded an increase in the bond to 92 million livres. For the first four years of Alaterre (1768–72), Lavoisier reported an average annual total loss of 1,547,976 livres.[55] Total earnings of a farmer would have then averaged about 134,400 livres, but this income would have been further reduced by the pensions of 409,000 and the *croupes* of 1.25 million livres imposed by the Crown on the Ferme.[56] If they had been borne equally, a farmer's annual income would have been 81,750 livres after all costs, giving a return of 5 per cent.

At the outset of the Ferme's negotiations for the David lease, Lavoisier's highly detailed 'Calculs des produits' should have alarmed his fellow tax farmers. After the financial crisis of 1769–70, the controller-general, the abbé Terray, was eager to squeeze out more revenue. He forecast that revenues would rise to 199 million and costs would be 47 million, enabling the farmers to pay a lease price of 152 million—a substantial rise over the previous figure of 132 million. In spite of this increase, the farmers collected more revenue. For the David lease, one contemporary estimate put a farmer's average earning from profits during the six years at 156,000 livres.[57] Combined with his other income, each would have earned 291,200 livres, a healthy recovery from the previous lease. This figure matches the estimate of another contemporary. François-Nicholas Mollien estimated that the total income from all sources for a farmer of the David lease was 300,000 livres per year.[58] Given the bond of 92 million livres, this estimate implies the same return of 17 per cent.

Under the Salzard lease, which combined a rental contract with revenue sharing, a farmer's salary was set at 30,000 livres and expenses at 3,600

[54] Interest was 10% on the first 60 million livres of the caution and 6% on the remaining 12 million: Archives Nationales, Acte de Société des Interésseés du Bail de Jean-Jacques Prevost.

[55] 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, 'Calculs des produits', p. 148.

[56] See Ibid., p. 159.

[57] Delahante, *Une Famille de finance*, p. 149. Necker's estimate of 40 million livres of total profits would have left each *fermier* with a slightly smaller annual profit of 111,000 livres and a return of 12%.

[58] Mollien, *Mémoires d'un ministre*, pp. 67–8.

livres, and interest on the bond was lowered.[59] On a total bond of 1.56 million livres, each tax farmer would receive 5 per cent on the first million livres of the bond and 7 per cent on the next 560,000 livres, for a total of 89,200 livres in interest.[60] Necker regarded this contract as decidedly superior to the David lease; and, indeed, incomes and returns were reduced. The total six-year profits of the Salzard lease were reported to be 45.96 million livres which, after the government took its half share, left 95,667 livres per year per farmer. For an estimated net income of 193,467 livres, a farmer earned a return of 10 per cent. Although some figures exist for the revenue from the last lease, the Mager lease, there are apparently no records of the profits. The only estimate is the absurdly high anticipated profit of 24.6 million for 1788, highly unlikely in a crisis year.[61]

Although changes in the tax contract halted in the 1780s, the failure to move all tax collection to a fixed wage contract was not trivial in terms of revenue lost to the Crown. Had the government been able to switch entirely to a wage contract and obtain most of the profits of the lease, it might have claimed another 20 million livres of revenue.[62] When the deficit stood at approximately 100 million livres by the mid-1780s, such a loss was not insignificant.[63] Although the profits of the farmers-general were not made public, the overall impression that they were substantial caused public affront.

Did the Crown allow the farmers to earn an excessive return?[64] The estimates of profits and returns summarized in table 2 are calculated to leave an upward bias when there is some doubt. If these returns form an upward bound, they represent a high return, but not one as shockingly high as claimed by the Ferme's detractors. Because of the risky nature of the business, there were also large swings in the profitability of the Ferme, as shown in table 3.

The returns cannot be considered excessive when compared with the earnings of other privileged members of the *ancien régime*. The 113 Paris notaries, an elite whose members combined legal business and financial intermediation, were estimated to earn annually between 60,000 and

[59] See *Etrennes financières*, p. 43; Matthews, *Royal general farms*, p. 263; Harris, 'French finances', pp. 147–8

[60] The number of farmers-general was reduced from 60 to 40, but their individual bonds of 1.56 million livres remained the same, yielding a total *caution* from the Ferme of 62.4 million livres.

[61] Each of the 44 farmers would have earned approximately 560,000 livres: Matthews, *Royal general farms*, pp. 269–71.

[62] The total profit of the lease was 25 million livres.

[63] White, 'Was there a solution?', tab. 1.

[64] As Adam Smith had pointed out, the profits represented a return to the tax farmers' management skills and the risk they had undertaken, to which should be added their success at bargaining. If the contract were open to competitive bidding, then the profits would have reflected only the first two elements. Under a wage contract, the managers would still need to be compensated for their management skills, and the government would absorb the risk. Most critics seemed to believe that the Ferme had gained excessive profits because it bargained well, but some may also have regarded the compensation for risk as part of the excessive profits. However, there is no simple method of decomposing the profits into their underlying components.

80,000 livres after 10 years' experience in office.[65] Doyle finds that they expected to earn a minimum return of 20 per cent in the last years of the monarchy, as did the provincial notaries.[66] Some of the wealthiest royal officials, the venal treasurers who operated like the farmers as private businessmen, earned similar returns. In 1775, the top five treasurers earned 369,459, 220,099, 131,906, 107,300, and 97,950 livres, representing returns of 22, 18, 20, 11, and 13 per cent. In terms of income and returns, a farmer stood among the very top of the *ancien régime*'s officials, but there was nothing that singled him out.

The Crown was certainly aware of the potential for high profits. Over the course of the century, tax revenues were growing; and ministers increasingly tried to squeeze more profits out of the farmers, first by taxing them and then more successfully by imposing a degree of revenue sharing and eventually some wage contracts. Although there is a divergence of opinion about the Crown's ability to capture revenue generated by the Ferme, ministers were successful in their attempts to obtain a greater flow of funds into royal coffers as tax revenues increased. The Crown was able to increase its tax collections because of its increased ability after mid-century to monitor tax collectors and its improved access to the capital markets.

IV

If the Crown had been able to monitor the honesty and efficiency of its tax collectors at low cost, it would have been preferable to pay tax collectors a wage. With a wage contract, the Crown could have assumed all the risk of fluctuating tax revenues, and it could have expected to gain the highest revenue. A revenue-sharing contract would be expected to yield less revenue to the government, which would share some of the risk with the tax collectors and sums collected would be lower as the collectors would lack the strong incentive of a rental contract where they would obtain all the residual revenue. Under a 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.

The shift from a *régie* to a tax farm in 1726 was driven in large part by the Crown's inability to monitor the tax collectors for whom fraud had become the dominant objective. According to Matthews, the *régie* permitted

> several secondary commissions, administering a fluctuating number of taxes under a variety of contracts and subcontracts. . . . So great was the confusion that the government often did not know which tax was being managed by which commission. The essential reason was the fact that these secondary commissions were excellent bases from which to raid the royal fisc. . . . The commissioners would detach a tax, sign a contact with the government containing a bonus clause

[65] Hoffman et al., *Priceless markets*.

[66] The estimate of returns in Doyle, *Venality*, pp. 204–7, includes only the purchase price of the office, not the working capital as part of the investment.

Table 4. *The burden of government debt, 1683–1788*

Year	*Tax revenues (m. livres)*	*Debt payments (m. livres)*	*Debt as % of Revenue*
1683	119	22	19
1699	145	48	33
1706	118	63	53
1713	131	90	69
1724	197	65	33
1740	211	57	27
1753	257	72	28
1764	322	124	39
1775	377	155	41
1788	472	292	62

Source: White, 'Was there a solution?', p. 89

based upon an outrageously low estimated yield and proceed to milk the *régie* for what it was worth.[67]

Lacking an effective bureaucracy to halt this looting and monitor the tax collectors, the Crown created the Carlier lease. Monitoring problems were central to the abandonment of the *régie*, but both revenue-sharing and rental contracts require considerably less monitoring than a wage contract. Risk was a key factor in deciding between these two contracts. The Crown found it difficult to smooth its revenue flows sufficiently at a reasonable cost by borrowing in the capital markets. The collapse of Law's system was followed by a default on the huge debt, much of which had been accumulated during the War of the Spanish Succession. Table 4 shows that debt payments before the war were 48 million livres in 1699 and rose to 90 million in 1713 at its conclusion, and the share of tax revenue required to service this debt rose from 33 to 69 per cent.[68] The two-stage default completed in 1726 reduced the debt burden, but left the Crown with low credibility as a borrower. Although data are lacking for the years immediately after the default, comparison of figures for the years 1724 and 1740 reveals that debt payments were reduced to at least 57 million livres, representing 27 per cent of tax revenue.

Now that the *régie* dissolved, the farmers had an incentive to ensure that they were not cheated of any revenue by their employees. A slow process of increasing centralized control began. Traditionally, each farmer maintained his own offices in his private hôtel or office, paying his own clerk and secretaries and maintaining his own accounts and funds, with limited interference from other tax farmers. But, by mid-century, the drive for greater operational efficiency gained speed, motivated, in part, by the potential for

[67] Matthews, *Royal general farms*, p. 73.
[68] Similar data on debt and taxation are presented in Weir, 'Tontines'; Sargent and Velde, 'Macroeconomic features'.

higher revenues from the growing economy.[69] In 1756, the operations of the farmers-general were consolidated in the Hôtel des Fermes on the rue de Grenelle-Saint Honoré, with annexes at the Hôtel de Longeville for the tobacco monopoly and the Hôtel de Bretonvilliers which held the bureaux for transit taxes and stamped paper.[70] By 1774, this central administration had 685 employees, and the Ferme as a whole had 28,762. To manage this large labour 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.[71] At the top, the Ferme was managed by a system of committees. Each farmer sat on four or five committees simultaneously, rotating positions every two years. On each committee, one farmer was appointed as correspondent and was in charge of managing its day-to-day business. Rigorous scheduled inspection tours of the Ferme's provincial offices were made to ensure that there was no fraud and that they were efficiently operated.

This complex management system was required to ensure the extraction of tax revenue from what were admitted to be a great variety of indirect taxes, differing from one jurisdiction to another. As this system matured, the farmers were able to take over the remaining separate tax farms. 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 and was incorporated directly into the lease. There was a further concentration in 1756 during the Henriet lease when the sub-farms of additional transit taxes and the royal domains, which had been farmed to 27 other companies, were rolled into the Ferme Générale.[72]

The ability of the Crown to monitor tax collection depended on the ability of the tax collection hierarchy to manage its agents as well as on the government's capacity to monitor the collection agency's management. The newly centralized tax farm, with a well-developed managerial hierarchy, made it easier for the relatively small royal government to monitor its activities. In the early eighteenth century, the Crown's ministers were excluded from direct oversight in the administration of the Ferme. Most finance ministers after Law had little authority over the Ferme. Machault obtained accounts from the Ferme only by stealth and Bertin forced some disclosure. In 1773, Terray demanded to see full accounts but managed to get only limited results.[73] Worse yet, the controllers-general were paid an annual income of 50,000 livres by the Ferme. Only in 1774 did Turgot refuse this bribe and donate it to charity, and Necker abolished it in 1780.[74]

[69] *Etrennes financières*, 1789, pp. 38–9; Matthews, *Royal general farms*, pp. 191–203; Durand, *Les Fermiers Généraux*, pp. 52–3; Chaussinand-Nogaret, *Gens de finance*, p. 43.
[70] Mousnier, *Institutions of France*, pp. 453–4.
[71] Durand, *Les Fermiers Généraux*, pp. 53–6.
[72] See Matthews, *Royal general farms*, p. 191; Durand, *Les Fermiers Généraux*, p. 51.
[73] Price, *France and the Chesapeake*, p. 371.
[74] Matthews, *Royal general farms*, pp. 203–4.

Even with a small bureaucracy, once the Ferme's power was centralized in Paris, it was easier for the government to exert its influence. Bosher reports that in 1788 the Ministry of Finance's 38 bureaux had a total of 256 employees who handled such diverse affairs as commerce, health, and economic development.[75] To oversee the Ferme, the ministry deployed 4 bureaux with a mere 21 employees. But Necker placed these officials strategically. The Ferme's autonomy was 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 treasury committee regularly. In 1780, the royal treasury's four head clerks were given powers of audit and inspection over the salt and tobacco monopolies, customs duties, and transit taxes.[76] In addition, Necker intervened by selecting the correspondents and the members of the committees. The Crown's improved monitoring was thus coincident with, and a necessary condition for, the shift away from a rental contract. Heightened monitoring permitted the government to accept modest revenue sharing in the David lease of 1774. This feature was increased in the Salzard lease of 1780, which placed the sales taxes and the royal domains in *régies* in 1780 and did likewise with the customs in 1783.

Although the Crown's increased capacity to monitor was a critical element in this transition, the acceptance of either a revenue-sharing or a wage contract required that the Crown be willing to accept more risk from fluctuations in tax revenues. Its capacity to accept risk rose as its ability to tap into the capital market increased. The drastic post-Law measures brought the Crown back to a basic fiscal balance. Real tax receipts per caput, which had been in decline, were rising steadily by the 1730s, with the farmers benefiting from their willingness to accept risk that the Crown had shunned. Improvement in its fiscal position allowed the Crown to gain more access to the capital markets.[77] During the War of the Polish Succession (1733–5) the budget was in deficit, but it was brought into balance afterwards. Although a small deficit persisted after the War of the Austrian Succession (1741–8), the Crown managed the war without a default. It was able to finance war by returning to the capital market, and debt payments rose to 72 million by 1753, as shown in table 4. Service on the Crown's long-term debt fell from 67 million livres in 1722 to 60 million in 1734 and 49 million in 1740.[78] The market was not threatened as the ratio of total debt payments to tax revenues scarcely changed. The Crown's capacity to borrow was reflected in its pricing of life annuities that were age graded, at rates that were close to actuarial fairness; no premium was necessary.[79] French financial markets were also beginning a period of rapid evolution,

[75] Bosher, *French finances*.
[76] Matthews, *Royal general farms*, pp. 204–5.
[77] For a discussion of these issues, see White 'France and the failure'; Hoffman, 'Taxes and agrarian life'.
[78] Riley, *Seven Years War*.
[79] Velde and Weir, 'Financial market'.

particularly as notaries began to develop extensive financial networks as brokers and even as intermediaries, making possible a large increase in private and public debt.[80] It is thus, perhaps, not surprising that when the Crown reached a degree of fiscal stability at mid-century, the fixed rental contract for tax collection first came under attack in pamphlets.

Nevertheless, neither these improvements nor later changes placed France's borrowing capacity on a par with Great Britain's. Comparable French government debt carried a substantial interest rate premium relative to debt of the British Crown.[81] The premium was rarely below 50 per cent in peacetime, with French yields often double British yields, and it increased sharply in wartime—the time of greatest need—revealing the market's concern about potential default. In significant contrast, interest rates for private borrowing in France were relatively stable between the 1740s and 1780s.[82] To lower its borrowing costs, the Crown found it desirable to carry out some, albeit limited, borrowing through the intermediation of various privileged groups that owed their position to the monarchy. For example, the Crown borrowed from the Estates of Burgundy, which could obtain long-term credit relatively cheaply because of their untarnished reputation as borrowers.[83] Similarly, by borrowing through the tax farmers for short-term credits, the Crown benefited from the farmers' reputation.

Reflecting the weakness of its position compared with that of the British government, the French Crown borrowed more using short-term debt, life annuities, and tontines. Britain's long-term funded debt accounted for an almost constant 85 per cent of its borrowing in the mid- to late eighteenth century, but France's share fell from 51 to 24 per cent. French tontines, whose issue dramatically increased in wartime, were usually priced to have high yields to entice wary investors.[84] The higher price of credit has implications for tax collection contracts. The higher interest rate cost for government borrowing meant that it was more costly for the French monarchy to smooth out fluctuations in tax revenue through borrowing, reducing the Crown's inclination to shift out of rental contracts. The Crown seems to have decided that it was cheaper to retain the Ferme as its collection agent and borrowing intermediary than to create a tax bureaucracy of its own and borrow directly from the markets.

The intensity and duration of the Seven Years War (1756–63) placed a much greater strain on royal finances. At a cost of 1,325 million livres, or approximately 190 million livres a year, it required substantial borrowing, raising debt payments to 124 million by 1764 and debt service to 39 per cent.[85] Interest rates rose sharply during the war; and unlike the British, the

[80] Hoffman et al., *Priceless markets*, ch. 1.
[81] See Bordo and White, 'Tale of two currencies', Velde and Weir, 'Financial market'.
[82] Hoffman et al., *Priceless markets*, ch. 5.
[83] Potter and Rosenthal, 'Development of intermediation'.
[84] Weir, 'Tontines'.
[85] These estimates are provided by Riley, *Seven Years War.*

French for the first time felt compelled to offer rates on new loans that were above the existing market rates. Another indicator of the degree of distress was the abandonment of age-graded pricing of life annuities in favour of higher yielding flat rate pricing. Compared with existing long-term government debt, they carried a substantial premium, indicating that the public believed they were subject to greater default risk. The public had reason to be anxious, as financial distress during the war led the Crown to engineer a selective default in 1759. Long-term loans were untouched, but royal decrees temporarily suspended payment of the *billets des fermes* and the *rescriptions* of the Receveurs Généraux. Unable to manage the debt burden, the Crown was forced into another partial default in 1770. Payments on the short-term debt of the *receveurs* and farmers were suspended again and forcibly converted. Pensions were cuts, tontines were converted into life annuities, and yields on other loans were reduced to 4 per cent.[86]

Following this default, the fiscal reforms of Necker and his predecessors appear to have reassured lenders sufficiently to induce them to finance the American War (1778–83), costing 1,066 million livres, and paid almost entirely with debt.[87] There was a big increase in direct borrowing by the Crown using life annuities, giving the government some confidence that it no longer needed to rely so heavily on privileged elites to intermediate credit. Although borrowing with life annuities still carried a substantial premium, reflecting heightened default risk, the timing of this development coincided with Necker's shift in the Ferme's contract to include larger elements of revenue sharing and wage payments. Thus, temporary shortfalls in tax revenues or huge wartime increases in expenditures were covered more by direct borrowing, enabling the Crown to accept the risks of varying tax revenues and to increase its tax take. To a greater extent than his predecessors, Necker appears to have appreciated the strategy of 'tax smoothing' that allowed the British Crown to operate an efficient macroeconomic policy, where large wartime increases could be covered by borrowing if there were sufficient increases in taxation to cover the additional cost of the debt payments and gradual repayment of the principal.[88]

Whether Necker's strategy would have succeeded is open to debate, especially as it was not low-cost borrowing. The debt from the American War left the Crown in 1788 with debt payments of 288 million livres that swallowed up 62 per cent of tax revenues, leading ultimately to a new default. It is revealing that the halt in the reform of tax collection following Necker's departure coincided with the beginnings of the Crown's fiscal crisis. Yields rose sharply and access to long-term capital markets began to dry up, thus depriving the government of a key tool to manage tax revenue risk.

[86] For futher discussion, see Weir, 'Tontines'; Velde and Weir, 'Financial market'; White, 'France and the failure'.

[87] Harris, 'French Finances'; *idem, Necker*.

[88] See Barro, 'Government spending'; Bordo and White, 'Tale of two currencies'; Velde and Weir, 'Financial market'; White, 'France and the failure'.

At the same time as it became increasingly difficult to manage the Crown's finances, the political will for reform collapsed and the movement towards a salaried corps of tax collectors halted, as the vested interests of the *ancien régime* rallied. Although his immediate predecessors had begun to reform the fiscal system, Necker met stiffer opposition. Despising him as a foreigner, a Protestant, and a nominally lower ranked official because of his religion, the *intendants* of finance and commerce who owned their offices and had access directly to the king's councils refused to cooperate. In response, Necker managed to gain the king's assent to dismiss these noble financiers and run the higher financial administration with clerks. Necker's dismissal in 1781 brought back to power ministers closely tied to the venal officials whose offices had been suppressed. His immediate successor Jean-François Joly de Fleury came from a distinguished *noblesse de robe* family; he, in turn, was followed in 1783 by other aristocrats, Henri-François de Paule II Le Fevre d'Ormesson and Charles-Alexandre de Calonne. These ministers recreated many venal offices that their reforming predecessors in the 1770s had abolished.[89] They represented an aggrieved influential interest group determined to prevent the demise of the *ancien régime*'s fiscal system, even as they struggled with a growing financial crisis.

V

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 with limited capital market access. The institution of the Ferme was bitterly attacked by critics, but the Crown's regular increases in the lease price of the tax farms and its shift to a share contract ensured that, although the tax farmers earned substantial profits and returns, they were kept in check. The innovations in management and organization improved the Ferme's collection methods and its profits, while at the same time making surveillance by the government easier.

The increased ability to monitor and accept risk moved the Crown slowly but incompletely towards revenue-sharing contracts and eventually towards the employment of salaried officials. The process was gradual and halting, reflecting to a certain degree the political inertia of the *ancien régime*. Reform moved most quickly in the 1770s when the government appeared to gain greater direct access to the capital market and vastly improved its surveillance of the Ferme. The consequence of the failure of further institutional reform was that the farmers continued to earn large profits amid a rise in popular antipathy. Of the tax wall and gates surrounding Paris, erected in

[89] Bosher, *French Finances*.

1788, it was said, 'le mur murant Paris rend Paris murmurant'—'the wall round Paris has the city murmuring'.[90] The demands of many of the *cahiers de doléances* for the Estates General of 1789 were met by the termination of the Ferme Générale, but anger with the tax farmers was not assuaged and pushed them towards the guillotine.

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[90] Mousnier, *Institutions of France*, p. 461.

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