

An Economic Perspective on the Irish Monetary Tithe: A Trigger for Irish Banditti and Secret Societies Disturbances*

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ABSTRACT

By the mid-18th century, the Irish tithe in kind was converted into a monetary tithe (known as the *modus decimandi*) that systematically produced relatively high tithing rates upon a poor harvest and shifted the revenue risks borne by the clergy to tillage farmers. But this added risk burden – best exemplified by high tithing rates relative to harvest revenues – only served to reinvigorate the groundswell of protest and violence that accompanied the many regional food riots provoked by a series of devastating harvests which, in turn, had created a subsistence crisis and the potential threat of famine. Taking the form of a secret society, these newest protestors – the “banditti” – took direct aim at the tithe, intervening by setting much lower rates backed up by violence (mostly against tithe agents). In 1823, Parliament responded to these disturbances by revamping the tithe in favour of a “composition”, making it compulsory only from 1832. However, the enactment of the mandatory provision triggered renewed protests and violence and the ensuing conflicts escalated into what became known as the Irish Tithe War of 1831-1838. This paper examines the tithing rates of the *modus decimandi* regime in terms of its share of annual crop revenues under different harvest scenarios and estimates the potential added revenue risks borne by tillage farmers under both monetary tithe regimes. This investigation finds that the primary cause of these secret society tithe disturbances, like that of the Irish Tithe War, was an increase in revenue risk that fell harshly upon small tillage farmers and for which there was insufficient compensation.

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1. Introduction

In two earlier papers,¹ I argued that the voluntary reform of the Irish tithe in 1823 from one that was (by law) payable in goods (i.e., an ad valorem production tax) to one that was payable in money as a “composition” (i.e., a fixed lump-sum land tax) was welfare-improving but did not measure up to the more equitable tax reform advocated by Parliament.² Although the 1823 reform greatly enhanced the economic incentives to exploit the land more efficiently and, in turn, helped to alleviate the country’s already heavy and mounting population pressure, it adversely affected many farmers on lots of 15 acres or less and cottiers on lots of not more than one acre.³ These two groups, unlike their larger counterparts, could neither expand nor diversify their operations and thus could not increase or stabilize their farm revenues so as to overcome the economic losses they would suffer as a consequence of the greater revenue risks inherent in this reform, risks arising principally from large harvest fluctuations due to variable weather conditions.⁴ In fact, a small landholder who was risk-averse in income would undoubtedly put a premium on the risk-sharing feature of the original tithe (i.e., a 90%-10% split between the tithe-payer and tithe-owner in the harvest revenue). This made him economically worse off under the reform and severely financially vulnerable to a series of poor harvests, a scenario that eventually played out to disastrous ef-

¹ Shaw D.J., “An Economic Perspective on the Irish Tithe War of 1831-1838”, in *Journal of European Economic History*, vol. 44, no. 3, 2015, pp. 91-140, and Shaw D.J., “The Composition for Tithes Act of 1823: Its Revenue Risk Impacts across Ireland”, in *Journal of European Economic History*, vol. 47, no. 1, 2018, pp. 85-148.

² *House of Commons Debates*: Mr. Goulburn, *Hansard*, 13 June 1822, 7 cc. 1031-32; Mr. O’Grady, *Hansard*, 13 June 1822, 7 cc. 1029-45; Mr. H. Parnell, *Hansard*, 13 June 1822, 7 cc. 1029-45; Sir J. Newport, *Hansard*, 6 March 1823, 8 cc. 494-501; Mr. Calcrafft, *Hansard*, 30 May 1823, 9 cc. 602-9; Mr. Goulburn, *Hansard*, 22 February 1831, 2 cc. 906-10; and Lord Stanley, *Hansard*, 5 July 1832, 14 cc. 95-138.

³ Cottiers held small plots of land under “conacre agreements”, contracts that allowed the land’s occupation to produce one or more crops without creating a landlord-tenant relationship.

⁴ See Shaw (2018).

fect during the “Great Famine” of 1845 to 1850.⁵ When the reform was made compulsory in 1832, a well-organized campaign of non-violent civil disobedience against payment of the new tithe was devised at public meetings, often disguised as hurling matches, across the south of Ireland. But this campaign gave way to violence and murder after the authorities attempted to seize the property of those who were in default of their tithe obligation. This agrarian tax rebellion escalated into what has become known as the Irish Tithe War of 1831-1838.

This paper intends to show that the Irish Tithe War was not an isolated episode; it had precedents with similar causes, events and consequences. The rise of armed “banditti”, as some hostile contemporaries called them, and Irish secret societies (made up mostly of peasant farmers) against the monetary tithe and its agents in the late 18th and early 19th centuries had analogous roots to the rise of the so-called “tithe hurlers” against the tithe as a composition. Although there may have been ancillary social issues associated with each protest in the midst of changing political conditions – most notably, the emergence of the United Irishmen movement and the union of Ireland with Great Britain after 1800 – which portended shifting socio-political norms and economic responses, these earlier disturbances were largely sparked by immediate economic concern about the increase in revenue risk embedded in the new tithe formulations and for which there was insufficient compensation. More succinctly, the monetary tithe shifted the risk-reward sharing profile of harvest revenues as established under the tithe in kind in favour of the Church of Ireland clergy and against tillage farmers. Though tithe-payers voiced dissatisfaction with the monetary tithe for its relatively high tithing rates concurrent with a poor harvest, it was the not-so-easily recognizable increase in revenue risk that reignited

⁵ The conversion of the tithe into a composition increased the financial vulnerability of small farmers and cottiers and appears to have contributed indirectly to higher average annual “excess death” rates of about 7 persons per 10,000 throughout Ireland from 1846 to 1851 (Shaw (2018)).

longstanding religious tensions against the tithe in Catholic regions of the south and west of Ireland hit by a series of devastating harvests and a subsistence crisis.

2. The Irish Tithe, 1542-1838

In 1542, as part of the “Irish Reformation”, the pre-existing tithe regime (applicable in the Pale, or *An Pháil Shasanach*, the part of Ireland directly under control of the English government since the 12th century) was given legal effect in statute law (i.e., 33 Henrician Act of 1542). In 1689, this regime was extended throughout Ireland under the Act of Uniformity.⁶ This tithe was levied at one tenth of the gross value of the farmland’s annual production and was customarily paid in kind by the landholder to the clergymen of the Church of Ireland. The next important political development came when the Irish House of Commons adopted the Agistment Act of 1735, which provided an exemption from tithes on the products of grassland.⁷ This discriminatory law followed a landlord protest against the imposition of this tithe on them – the only reported protest against the tithe in kind.

Although the requirement that the tithe be paid in kind remained on the statute books, by the mid-1700s tithe transactions were mostly executed under an agreement of *modus decimandi* that substituted a monetary disbursement for the in-kind payment, ostensibly to avoid wasteful handling, transport, storage and selling costs. A tithe proctor, an agent of the tithe-owner, was responsible for valuing and collecting the tithe.

It was under the *modus decimandi* that the tithe first came under assault from the peasant classes. In the late 18th and early 19th centuries, the south and west of Ireland were the theatre of a series of

⁶ Lenihan P., *Consolidating Conquest - Ireland 1603-1727*, Harlow, 2008, p. 7.

⁷ Donnelly J.S. Jr., *Captain Rock and the Irish Agrarian Rebellion of 1821-1824*, University of Wisconsin Press, Madison, 2009, p. 206.

violent agrarian disturbances against the monetary tithe and its agents, one involving the residents of as many as 11 counties and another lasting eight years. Sparked by agricultural recession, which was often immediately followed by local food riots and in several cases by communal-based uprisings aimed at diverting or restraining inter-regional and inter-industry trade in agricultural commodities in order to avert famine,⁸ these protests against the tithe were conducted by different outlaw gangs, each adopting a distinctive *nom de guerre* like the “Whiteboys” of 1769-1776, “Rightboys” of 1785-1788, “Threshers” of 1806-1807, or “Rockites” of 1821-1824.^{9, 10} Their memberships came primarily from the lowest strata of soci-

⁸ These riotous mob protests – aimed at accessing food directly, reducing food prices to a level deemed appropriate (i.e., affordable), shifting grain supplies away from distilled beverage production and towards food production, or preventing the transport of food out of a region – in which the authorities declined to bring to bear the full range of sanctions at their disposal against the transgressors had been considered socially acceptable in times of crisis, in keeping with what has been called a “moral economy” (see Kelly J., *Food Rioting in Ireland in the Eighteenth and Nineteenth Centuries: The Moral Economy and the Irish Crowd*, Four Courts Press, Dublin, 2017; and Bartlett T., “An End to Moral Economy: The Irish Militia Disturbances of 1793”, in *Past and Present*, no. 99, May 1983, pp. 41-64). This so-called “moral economy” policy is believed to have been practiced across Ireland for more than a century and a half beginning in the early 18th century (see Kelly J., “Food Rioting, an Overlooked Irish Tradition”, in *The Irish Times*, November 27, 2017). However, these questionably unlawful actions, which were traditionally permitted during a subsistence crisis of a mostly self-sufficient regional agrarian economy, were impediments to the efficient operation of a nascent national economy which was increasingly shifting towards regional specialization in production – agricultural and industrial goods – and inter-regional and international trade. Moreover, these practices inevitably pitted the people and industries of one region of the country against the people and industries of another. Both the policy position taken by the Society of United Irishmen and the Act of Union of Great Britain and Ireland undoubtedly challenged the underlying political dynamic concerning the acceptability or legality of these practices (see Quinn J., “The United Irishmen and Social Reform”, in *Irish Historical Studies*, vol. 31, no. 122, November 1998, pp. 188-201).

⁹ Other secret societies, such as the “Peep o’Day Boys”, “Defenders”, “Terry Alts”, “Steelboys”, “Oakboys”, “Ribbonmen”, and “Caravats”, also opposed the tithe, but it was not their principal grievance.

¹⁰ Wall M., “The Whiteboys”, in Williams T.D. (ed.), *Secret Societies in Ireland*, Gill and Macmillan, Dublin, 1973, p. 13, points out that the House of Commons passed an act in 1756 (29 Geo. II, c. 12) that introduced penalties for issuing threatening letters, engaging in incendiarism, destruction of property, or attacks on tithe-owners or their

ety – labourers, cottiers and town tradesmen – but also counted cereal crop farmers, and even bridged social classes to include some of the Protestant gentry.¹¹ Their members willingly or unwillingly submitted to a surreptitious oath of allegiance and were led by an alias or fictitious captain.¹² They wore disguises – typically, white sheets or garments over their heads and clothing – to distinguish themselves from others when conducting their unlawful clandestine operations, usually under the cover of darkness. But this “nocturnal, clandestine activity was superseded by, or coexisted with, open operations in the daytime”,¹³ and “the Whiteboy discontent of 1769-76 looked less like a regional rising and more like a protracted series of scattered local combinations, often sharing the same grievances but lacking close co-ordination”.¹⁴ Additionally, three of these four banditti or secret society gangs brazenly extended their hostilities beyond parsons to include Catholic priests, with the aim of expanding the scope of reductions from tithing rates to clerical fees (i.e., baptisms, marriages, confessions, visitations of the sick, funerals). They adopted the tactic of posting public notices containing a schedule of regulations prescribing permissible tithing rates and Catholic Church service fees at targeted parish chapels and churches.

For example, in February 1786, the Rightboys openly declared:

You are hereby cautioned not to pay Ministers Tythes only in the following manner, viz. potatoes 4s per acre, wheat and barley, 1s 6d per acre, oats and meadows, 1s per acre – Roman Catholic Clergy to receive for marriages, 5s for baptism, 1s 6d for anointing and visitation of the sick, 1s for mass 1s for confession, 6d ... you

agents. This legislative (re)action suggests that opposition to the monetary tithe may have begun earlier than the first Whiteboys Rebellion of 1761-1763.

¹¹ Donnelly J.S. Jr., “Irish Agrarian Rebellion: The Whiteboys of 1769-76”, *Proceedings of the Royal Irish Academy; Section C: Archaeology, Celtic Studies, History, Linguistics, Literature*, 1983, pp. 293-295.

¹² For example, leaders went by the name or title of “Captain Right”, “Captain Thresher” or “Captain Rock”.

¹³ Donnelly J.S. Jr., and Donnelly J.J. Jr., “The Rightboy Movement, 1785-8”, in *Studia Hibernica*, vol. 17/18, 1978, p. 125.

¹⁴ Donnelly (1983), p. 295.

are hereby warned not to pay Clerk money, nor any other dues concerning marriages ...¹⁵

Similarly, the Threshers stipulated that tithe-payers were to pay 3s 3d per acre for oats and potatoes.¹⁶ When necessary, oath-bound members backed up these regulations with intimidation, threats of violence, destruction of property, the razing of farms, the maiming of people, and murder. These last two punishments were usually reserved for tithe-owners' agents.¹⁷

It was not until 1823 that Parliament responded to the grievances of tithe-payers and Church of Ireland clergy by promulgating and adopting the Composition for Tithes Act¹⁸ whereby Irish landholders would pay all tithes to the Church of Ireland in money rather than in goods. The new tithe was redesigned to be a revenue-neutral, lump-sum land tax or, more simply, a "composition". Once the composition was established by the negotiating parties, the rate structure of the new tithe would be calculated on the basis of the acreable size of the parish, what could be produced on each parcel of land, and the average price of corn over a period of seven years prior to 1 November 1821. The tithing rate schedule was to be updated every seven years using the septennial price of corn from the preceding period. Unlike its predecessors, the tithing rates would apply to grazing and tillage operations, thereby addressing longstanding complaints of inequity between tillage farmers and graziers.

The very large reductions in tithing rates on tillage lands – in some cases by more than 90 per cent – did, in time, stimulate considerable conversion to the new tithe regime. In 1824, one year after the inception of the new tithe, 400 Irish parishes chose to convert

¹⁵ Bric M.J., "Priests, Parsons and Politics: The Rightboy Protest in Cork, 1785-1788", in *Past and Present*, vol. 100, no. 1, 1983, p. 114.

¹⁶ Howell T.B., *A Complete Collection of State Trials and Proceedings for High Treason and Other Misdemeanors*, Hansard, London, 1822, pp. 146-148.

¹⁷ See Lewis G.C., *On Local Disturbances in Ireland and on the Irish Church Question*, B. Fellowes, London, 1836, p. 41; and Donnelly (1983), pp. 295-296 and 301-311.

¹⁸ The act can be found in Rickards G.K., *The Statutes of the United Kingdom of Great Britain and Ireland*, Her Majesty's Printers, London, 1838, pp. 276a-qq.

their tithe into a composition, and by January 1832, 1,539 of 2,450 parishes, or 62.6 per cent, most of them dominated by large cereal crop operations, had adopted a composition.^{19, 20}

A very patient Parliament eventually reacted to the defiant parishes by passing the Composition for Tithes (Ireland) Act of 1832, which made the conversion of the tithe into a composition compulsory throughout Ireland. Not surprisingly, a resistance movement emerged, but this time it was uniquely focused on the tithe (i.e., its goals did not include clerical fees or wages). Its members came from a much wider spectrum of society than the lower-order social classes of the outlaw gangs of an earlier day, including gentleman farmers, professionals, magistrates, many earls and lords, and even Catholic priests.²¹ Membership was voluntary (i.e., there was no requirement of an oath of allegiance) and largely parochial in organization. The movement's tactics of nonviolent civil disobedience were carefully devised and disseminated, not in secret but at public meetings, sometimes held under the guise of hurling matches;²² hence, the members of this anti-tithe movement were styled "tithe hurlers".

The tithe enforcement officials, backed up by the police and the militia, countered by seizing the property of farmers who were in default on their tithe. Predictably, the resistance movement followed suit and its campaign of nonviolent civil disobedience was accompanied by a parallel track of violence and murder. This agrarian tax rebellion escalated into what became known as the Irish Tithe War of 1831-1838, which did not end until a political compromise was found whereby parish compositions were reduced by 25 per cent and the attendant liability was transferred to landowners.

¹⁹ Erck J.C., in Dwyer G., *A View of Evidence on the Subject of Tithes in Ireland, Given Before the Committees of the House of Lords and Commons*, Edinburgh, 1833, D, pp. 47-101; Donnelly (2009), p. 215.

²⁰ See Shaw (2018).

²¹ For a better understanding of the Catholic hierarchy's foray into Irish politics, see McDonough O., "The Politicization of the Irish Catholic Bishops, 1800-1850", in *The Historical Journal*, vol. 18, no. 1, 1975, pp. 37-53.

²² Higgins-McHugh N., "The 1830s Tithe Riots", in Sheehan W., Cronin M. (eds.), *Riotous Assemblies: Rebels, Riots & Revolts in Ireland*, Mercier Press Ltd., Cork, 2011, pp. 84-85.

3. The *Modus Decimandi*, Crop Revenue Risks, and the Tithe Disturbances of 1769-1823

Historians have written extensively about the banditti and secret society disturbances between 1769 and 1823, observing that tithe-payers and their rebel organizations asserted that the tithing rates established under the monetary tithe regime were too high;²³ that is, the rates were more than 10 per cent of the market value of an acre's production of the tithable article.²⁴ Consider the following facts and arguments in support of tithe-payers' grievances:

The average crop of wheat... is about six barrels; the average price... is about 25s. a barrel... [which] come[s] to 7£. 10s. The tenth... would [be] 15s.... the cost of saving after binding... drawing... threshing... carrying to market... selling... reduces the tithe... to 5s. 10d., but adding the straw... makes 7s. 10d.... instead of 10s. to 12s.²⁵

In the year 1816, such was the fall in rain that most crops were materially injured, and some completely lost... and yet for all these expenses, losses and risks, the tithe-owner makes not any allowance whatever to the farmer.... [T]he peasantry pay nearly two legal tenths instead of one.²⁶

²³ See Lewis (1836), p. 41, Beaumont G.A. de, *Ireland: Social, Political, and Religious*, Ibotson and Palmer, London, 1839, p. 153; Burns R.E., "Parsons, Priests, and the People: The Rise of Irish Anti-Clericalism 1785-1789", in *Church History*, vol. 31, no. 2, 1962, pp. 155-156; Donnelly and Donnelly (1978), pp. 126 and 139; Donnelly (1983), pp. 293, 299 and 312; Bric (1986), pp. 105 and 109; Lydon J., *The Making of Ireland: From Ancient Times to the Present*, Routledge, London, 1988, p. 260, Katsuta S., "The Rockite Movement in County Cork in the Early 1820s", in *Irish Historical Studies*, vol. 33, no. 131, 2003, p. 287; and Donnelly (2009), pp. 163 and 188.

²⁴ Burns (1962), p. 156; Donnelly (1978), pp. 156-157, Donnelly (1983), p. 300; Bric (1986), p. 104; Katsuta (2003), p. 287; and Donnelly (2009), pp. 189-190.

²⁵ James C., in the Select Committee of the House of Commons, *Tithes in Ireland*, Second Report, pp. 342-343. Mr. James was a barrister with considerable experience in the Consistorial Courts of Ossory, Ferns and Cashel who had submitted a number of reports against the tithe practices.

²⁶ Collis W., in the Select Committee of the House of Commons, *Tithes in Ireland*, Second Report, p. 477. Mr. Collis, a resident of County Kilkenny, had long petitioned for the abolition of the tithe.

These grievances did not go unchallenged. Henry Parnell, a Member of Parliament who was concerned with the tithe system, argued that tithe-owners received much less than their “sacred tenth”:

An acre of wheat, estimated to produce a crop of eight barrels, was usually charged at the rate of 10 shillings – 5 percent of its market value.... [A]n acre of potatoes, producing an average crop of seventy barrels, paid a tithe of 8 shillings; a 10 percent tithe would have been 28 shillings.²⁷

Upon closer examination of these conflicting arguments and calculations, it appears that a farm’s output or crop yield was the main bone of contention; a secondary issue was the transfer price established between the two contracting parties. The disagreement arose because the tithe proctor could not realistically observe the output of each and every farm at harvest time, all the more given the extreme subdivision of the land in Ireland by the late 1700s and early 1800s. The practice devised to address this shortcoming was to assess the tithe at the crop’s maturity date, using local knowledge of historical crop yields and current weather conditions. But some observers have disputed the actual timing of this practice and the accuracy of the valuations: “The proctors valued... at seasons when it was scarcely possible to form an estimate of the value of the crops ... on some occasions when the corn was scarcely shot out”.²⁸ Since the price of these crops fluctuated fairly widely throughout the calendar year, the exact timing of the transfer or transaction price also proved to be contentious.²⁹

Such a large disparity of views and supporting data suggests that a more thorough statistical investigation is warranted. Tables 1

²⁷ Henry P., *Hansard*, London, 19 May 1809, 14:626.

²⁸ James C., in the House of Commons Select Committee, *Tithes in Ireland*, Second Report, p. 283.

²⁹ In general, tithe-payers argued that the transfer price should be the market price prevailing at harvest time, while proctors argued for the market price prevailing at Christmas (see Shaw, 2015, p. 97).

and 2 were constructed to answer three different questions: What share of crop revenues did the *modus decimandi* tithing rates represent when the harvest conformed to the norm? What were the shares when the harvest did not conform to the norm? What are the implications, if any, in terms of risk sharing with the move from the tithe in kind to the *modus decimandi*? Table 1 addresses the first question, Table 2 the second and third questions. Both tables use the reported Irish tithing data for the years 1786, 1808, 1817-1821 and 1822. The first and second periods marked the tail end of the Rightboys and Threshers' disturbances, respectively; the third multi-year period between the Threshers and Rockites' disturbances was free of general protest; and the fourth period marked the mid-point of the Rockites' disturbances. So, three of these four periods followed a reported episode of substandard harvests and might provide evidence supporting the protesters' complaints, while the remaining period appears to have been a time of normal harvest conditions and might, therefore, lend support to the clergy's position.

Table 1 assumes the norm. It shows that, using the average annual commodity prices in the years under investigation and contemporary crop yields for the period, the reported tithing rates in County Cork in 1786 and across Ireland in 1808 were, overall, substantially less than 10 per cent of farm revenues for cereal crop and potato farmers alike. For example, tithing rates represented as little as 2.2 to 4.5 per cent of potato revenues and as much as 5.5 to 9.6 per cent of barley revenues in 1786. In 1808, tithing rates amounted to a little more than 7 per cent of oats and barley revenues. Hence, only the highest rates charged on wheat and barley in County Cork during 1786 began to approach the legal entitlement of 10 per cent. In fact, given the above assumption of typical harvest yields, the reported data and the accompanying calculations bring to the fore the inherent irrationality of potato farmers, who enjoined the Rightboys and Threshers to continue their protests past 1785 and 1807, respectively. Tactically setting out 10 per cent of the potato harvest for payment in kind or adhering to the permissible tithing rate restrictions set out by these outlaw gangs when the monetary tithe varied be-

TABLE 1
Estimated Prices, Average Yields, Harvest Values,
Tithing Rates per Acre and Tithing Rates per Harvest Value
for Selected Crops in 1786, 1808, 1817-1821 and 1822

Year and Tithable Crop	Price (s per cwt)	Estimated Yield (cwt per acre)		Estimated Harvest Value (s per acre)		Tithing Rates (s per acre)	Tithing Rates as a % of the Estimated Harvest Value	
		Scenario		Scenario			Scenario	
		L	H	L	H		L	H
1786*								
Wheat	8.82	12.7	13.3	112.2	117.0	3.91-9.88	3.5-8.8	3.3-8.4
Oats	4.63	11.1	13.3	51.3	61.3	0.98-3.91	1.9-7.6	1.6-6.4
Barley	4.29	16.7	18.9	71.5	80.9	3.91-6.89	5.5-9.6	4.8-8.5
Potatoes	1.73	127.9		221.2		4.94-9.88	2.2-4.5	
1808**								
Wheat	14.47	12.7	13.3	184.1	191.9	10.00	5.4	5.2
Oats	8.77	11.1	13.3	97.1	116.2	7.00	7.2	6.0
Barley	8.13	16.7	18.9	135.4	153.4	9.67	7.1	6.3
Potatoes	3.42	127.9		437.3		8.00	1.8	
1817-1821								
Wheat	13.28	12.7	13.3	168.9	176.1	5.17-7.50	3.1-4.4	2.9-4.3
Oats	7.26	11.1	13.3	80.4	96.2	3.42-5.75	4.3-7.2	3.6-6.0
Barley	8.39	16.7	18.9	139.7	158.3	4.54-6.92	3.2-5.0	2.9-4.4
Potatoes	2.76	127.9		352.9		5.17-6.92	1.5-2.0	
1822								
Wheat	6.89	12.7	13.3	87.6	91.4	10.17	11.6	11.1
Oats	4.57	11.1	13.3	50.6	60.5	7.17	14.2	11.9
Barley	4.95	16.7	18.9	82.4	93.4	10.17	12.3	10.9
Potatoes	1.80	127.9		230.2		10.17	4.4	

Notes: cwt refers to a hundredweight; * County Cork tithing rates only; ** Waterford market prices; L = lowest estimate and H = highest estimate.

Sources: Prices were obtained from Kennedy L., Solar P.M., *Irish Agriculture: A Price History*, 2007, Appendix A1, A3, A5 and A6 and are converted from Irish to British shillings. The average yields for wheat, oats and barley were obtained by selecting the lowest and highest estimates from the 1770s (Young), from 1801 to 1824 (Dublin Society), and 1812 (Wakefield) found in Allen R.C., and Ó Gráda C., "On the Road Again with Arthur Young: English, Irish, and French Agriculture during the Industrial Revolution", in *The Journal of Economic History*, vol. 48, no. 1, 1988, Table 3, p. 107. The average yield for potatoes was obtained from Ó Gráda C., *Black '47 and Beyond: the Great Irish Famine in History, Economy, and Memory*, 1999, p. 17. Tithing rates for 1786, 1808, 1817-1821 and 1822 were obtained from Henry P., *Hansard*, 14:625, Akenson D.H., *The Church of Ireland: Ecclesiastical Reform and Revolution, 1800-1885*, London, 1971, p. 89, and Table 23, p. 90, and Erck, in Dwyer (1833), Appendix D, p. 99, respectively

TABLE 2
Titling Rates per Estimated Harvest Value
per Acre and Net Revenue Risk Given Different Yields
for Selected Crops in 1786, 1808, 1817-1821 and 1822

Year and Tithable Crop	Monetary Titling Rates as a Percentage of Harvest Value					Revenue Risk (standard deviation)	
	60% of Average Yield	80% of Average Yield	Average Yield	120% of Average Yield	140% of Average	Monetary Tithe	Tithe in Kind
	%						
1786							
Wheat	5.7-14.4	4.3 -10.8	3.4-8.6	2.8-7.2	2.4-6.2	36.2	32.6
Oats	2.9-11.6	2.2 - 8.7	1.7-6.9	1.5-5.8	1.2-5.0	17.8	16.0
Barley	8.6-15.1	6.4 -11.3	5.1-9.0	4.3-7.5	3.7-6.5	24.1	21.7
Potatoes	3.7 - 7.4	2.8 - 5.6	2.2-4.5	1.9-3.7	1.6-3.2	70.0	63.0
1808							
Wheat	8.9	6.7	5.3	4.4	3.8	59.4	53.5
Oats	10.9	8.2	6.6	5.5	4.7	33.7	30.4
Barley	11.2	8.4	6.7	5.6	4.8	45.7	41.1
Potatoes	3.0	2.3	1.8	1.5	1.3	138.3	124.5
1817-1821							
Wheat	5.0 - 7.2	3.7-5.4	3.0-4.3	2.5-3.6	2.1-3.1	54.6	49.1
Oats	6.5-10.9	4.8-8.1	3.9-6.5	3.2-5.4	2.8-4.7	27.9	25.1
Barley	5.1 - 7.7	3.8-5.8	3.0-4.6	2.5-3.9	2.2-3.3	47.1	42.4
Potatoes	2.4 - 3.3	1.8-2.5	1.5-2.0	1.2-1.6	1.0-1.4	111.6	100.4
1822							
Wheat	18.9	14.2	11.4	9.5	8.1	28.3	25.5
Oats	21.5	16.1	12.9	10.8	9.2	17.6	15.8
Barley	19.3	14.5	11.6	9.6	8.3	27.8	25.0
Potatoes	7.4	5.5	4.4	3.7	3.2	72.8	65.5

Note: Measures of risk are based on harvest outcomes with probabilities of occurrence: (1) 60% of average yield = 0.10; (2) 80% of average yield = 0.20; (3) average yield = 0.40; (4) 120% of average yield = 0.20; (5) 140% of average yield = 0.10; these calculations are based on the average of the lowest and highest estimated harvest values found in Table 1.

tween 2.2 and 4.5 per cent of the harvest's market value in 1786 and averaged 1.8 per cent of the harvest's market value in 1808 ran counter to their economic interest. Under these new circumstances, adhering to the proctors' monetary tithing rate assessments made more economic sense for potato farmers.

The average diocesan tithing rates charged on cereal crops and potatoes from 1817 to 1821 were also substantially less than 10 per cent of harvest values. These post-Napoleonic war tithing rates were reduced, on average, by between 22 and 40 per cent from the reported 1808 levels. Given that these reductions exceeded the drop in crop prices – the largest price decline of these crops was 20 per cent – it is not surprising that the average tithing rates during this period were less burdensome than those of 1808.³⁰ Indeed, this period's diocesan tithing rates represented from as little as 1.5 per cent of potato revenues to as much as 7.2 per cent of oats revenues for the 1817-1821 period.

By 1822, circumstances appear to have changed. The reported average tithing rates charged across Connaught, Leinster and Munster provinces were significantly higher than the average for the 1817-1821 period. For instance, the average tithing rate applied to barley in 1822 was 77 per cent higher than the average for 1817-1821. This increase contrasts sharply with price developments during this period. Continuing with barley, its average annual price in 1822 was down 41 per cent from the average for the 1817-1821 period. Wheat prices declined even more, falling, on average, by as much as 49 per cent. Clearly, these market developments reversed the relative fortunes of tithe-owners and tithe-payers.

Using the estimated country-wide average crop yields of all four commodities from the 1770s to 1824 and their average prices in 1822, Table 1 indicates that the average tithing rates of 10s 2d for wheat and barley amounted to somewhere between 11.1 and 11.6 per cent and between 10.9 and 12.3 per cent, respectively, of the market value

³⁰ Prices were obtained from Kennedy L., Solar P.M., *Irish Agriculture: A Price History*, Dublin, 2007, Appendix A1, A3, A5 and A6.

of an acre's production of these two crops. The average tithing rate of 7s 9d for oats amounted to anywhere between 11.9 and 14.2 per cent of the market value of an acre's production and the average tithing rate of 10s 2d for potatoes amounted to 4.4 per cent of the market value of an acre's production. Therefore, in 1822, except in the case of potatoes, the tithe assessments amounted to slightly more than one-tenth of the market value of an acre's production of the selected crops.

Clearly, caution is necessary when drawing firm conclusions from these very limited and aggregated data. With this caveat tacitly kept in mind, the data suggest that: when the annual harvest was "typical" or fit the "norm" by historical standards, the monetary tithe seems to have preserved the customary sacred-tenth bargain between the clergy and crop farmers; and the incidence of the monetary tithe was greatest for cereal crop producers and much less burdensome for potato farmers. The latter finding begs a number of questions: Why did cottiers or potato farmers, and not cereal crop farmers, form the backbone of the earliest tithe protests and disturbances? In offering what appears to be systematically better tithing rate terms (as a share of revenue) to potato farmers / cottiers relative to cereal crop farmers, were the clergy and their proctors implicitly recognizing that these farmers would otherwise be exposed to greater, possibly intolerable revenue risks than cereal crop farmers with much larger and more diversified farming operations?

But opposition to high tithing rates, we are told, did not emerge when the annual harvest could be described as typical for the period. Reports suggest that the Whiteboys, Rightboys and Rockites' disturbances arose following a devastating harvest or a series of poor harvests.³¹ Indeed, it has been reported that in County Kilkenny, under the monetary tithe, "Some allowance was normally made for the

³¹ See Donnelly (1983), Kelly (2017), Refaüssé R., *The Economic Crisis in Ireland in the Early 1780s*, Ph.D. Thesis, Trinity College, Dublin, 1982, and Donnelly J.S. Jr., "Captain Rock: The Origins of the Irish Agrarian Rebellion of 1821-24", in *New Hibernia Review*, vol. 11, no. 4, Winter, 2007, pp. 47-72.

quality of the crop but this was generally not considered to be commensurate with the difference in yields which, in the case of wheat, could vary from four and sixteen barrels an acre".³² This observation, but presented as a complaint, was repeated by others from as far away as Galway: "Another great objection seems to be valuing the tithe by acre, without making sufficient allowance for inferior or bad crops".³³ This testimony suggests that the tithing rates as a percentage of their harvest value, as shown in Table 1, may be understated.

An investigation of the tithe's share of crop revenues during the three rebellious periods under alternative harvest scenarios to those found in Table 1 seems warranted. Table 2 includes five scenarios for harvests ranging from 60 to 140 per cent of the norm, each incorporating a probability of occurrence that declines from the mean or norm until reaching the best and worst harvest results. Obviously, more extreme harvests could have been considered, ranging from devastating to exceptional, which would imply greater revenue risks, but our five scenarios are sufficient to draw out tithe-payers' complaints.

For example, in 1786, following the reported subsistence crisis of 1782 to 1784, a poor harvest yield equal to 80 per cent of the average for this period would imply that the highest reported tithing rates for wheat and barley would have accounted for about 11 per cent of crop revenues (see Table 2). A poor harvest yield equal to 60 per cent of the average would imply that the highest tithing rates on wheat, oats and barley might have accounted for 11.6 to 15.1 per cent of crop revenues. And such high shares of crop revenues would have followed three years of excessive tithing rates during the reported subsistence crisis.

Now consider the Threshers' uprising. If the crop prices and tithing rates of 1806 and 1807 were similar to those of 1808,³⁴ then

³² O'Hanrahan M., "The Tithe War in County Kilkenny - 1830-1834", in Nolan W., Kevin W. (eds.), *Kilkenny: History and Society*, Geography Publications, Ireland, 1990, p. 483.

³³ Dutton H., *A Statistical and Agricultural Survey of the County of Galway*, The Royal Dublin Society, Dublin, 1824, p. 363.

³⁴ The average annual prices of wheat and oats in the south of Ireland were actually lower in 1806 and 1807 than in 1808, while those of barley and potatoes were not significantly different over these three years (see Kennedy and Solar, 2007).

crop yields that were 60 per cent of their average for the period would produce tithing rates on oats and barley exceeding the customary 10 per cent share. The tithes would have amounted to 10.9 and 11.2 per cent of crop revenues, respectively. However, better harvest results would not have breached the 10 per cent share entitlement. So, the demands by Threshers for a tithing rate of 3s 3d per acre on oats might have been justified, given these assumed conditions, only in the case of one or more devastatingly poor harvests.

Relatively high tithing-rate shares of revenues, of the order of 11 to 14 per cent, for 1822 have already been estimated and reported in Table 1 using average crop yields for the period. However, Table 2 shows that the shares might have been much higher, reaching 19 to 22 per cent of crop revenues for wheat, oats and barley with harvests at only 60 per cent of their norm.

It could be argued that tithing rates exceeding a 10 per cent share of crop revenues in poor harvest years are required to offset rates that were below a 10 per cent share in years of bumper crops for the tithe-owner to receive his legal entitlement over the longer term – though there are no reports of the clergy making such an argument, probably because tithes were typically set at rates lower than 10 per cent. But this observation overlooks the fact that there was a subtle (if unknown) transfer of risk from clergymen to tillage farmers involved in the shift from the tithe in kind to the monetary tithe. Given the harvest assumptions incorporated in Table 2, the shift in tithe regimes would raise crop farmers' revenue risk substantially during all four time periods. For example, in 1786, wheat farmers are estimated to have experienced an increase in risk (as measured by the standard deviation about the mean harvest value) from 32.6 to 36.2, as did farmers of oats (16.0 to 17.8), barley (21.7 to 24.1) and potatoes (63.0 to 70.0). These farmers would also have incurred similar increases in risk in the three subsequent periods under review. In the end, wheat, oats, barley and potato farmers would have suffered an average increase in revenue risk of about 11 per cent under the monetary tithe regime compared with the tithe in kind.

This risk analysis provides a plausible answer to the question of

why potato farmers/cottiers formed the backbone and leadership of the outlaw gangs who organized against the monetary tithe regime and its agents even though they bore a lower overall tithing rate in relation to revenues than did other tillage farmers – a tithing rate that never exceeded 10 per cent of potato revenues even with a harvest yield that was 60 per cent of its average. Potato farmers, the least financially stable tithe-payers, were less able than cereal crop farmers to bear the increase in revenue risk inherent in the monetary tithe regime. In abandoning the tithe in kind for the monetary tithe, Church of Ireland clergymen in effect reduced their exposure to tithe revenue risk only by transferring it to tithe-payers. Somewhat to their credit, however, many clergymen and their agents recognized that many potato farmers/cottiers would not have been able to sustain this additional risk and they therefore established a tithing rate schedule across the range of crops that, for potato farmers, incorporated a larger discount from the standard 10 per cent rate than was offered to farmers of other crops.³⁵ The relatively lower tithing rates applied to potatoes resulted in lower collection and court costs for the clergy while allowing them to publicly boast of providing more generous tithing terms to cottiers in recognition of their poor financial status.

4. The Composition of Tithes and Crop Revenue Risks, 1824-1830

The preceding section provided a simple example of how variations in harvest yields could drastically alter the risk-sharing performance of the monetary tithe relative to the tithe in kind. This section will carry over that exercise by providing estimates of the revenue risk borne by tillage farmers in some of the 400 parishes that

³⁵ It is highly likely that had the clergy not provided such favourable discounts, more potato farmers would have fallen into arrears while others might not have ever been able to pay in full. In this event, the clergy would have been forced to seek redress in the courts, and any savings on transaction costs from switching tithing regimes would only have gone to meet higher collection and court costs.

converted their tithe into a composition in 1824 in comparison to that borne by their counterparts in parishes in the same region that chose to stick with the *modus decimandi*. However, unlike in the previous section, this investigation will not rely on hypothetical harvest yields whose frequencies are uniformly distributed around the average to calculate a farmer's exposure to crop revenue risk. Instead, the estimates are based on harvest reports found in the newspapers *Waterford Mirror* and *Northern Whig* between 1824 and 1830.³⁶ These reports provide an annual assessment of the harvests of major crops grown throughout southeast Ireland – counties Carlow, Kilkenny, Tipperary (southern district), Waterford and Wexford – and northeast Ireland – counties Antrim, Armagh and Down – describing yields and acreage sown relative to what was considered typical for the time and place. A caveat, however: the reports do not estimate harvest quantities but offer subjective harvest evaluations.

A redeeming feature of these harvest evaluations is that the consistent language they used allowed them to be clearly delineated into five categories: “very poor”, “poor”, “average”, “good”, and, finally, “very good”.³⁷ As in Solar (1989), these categories are converted into quantifiable ratings, a more convenient way of summarizing the information content of these harvest observations. For ease of comparison with the previous section, these ratings are placed on a five-point linear frequency scale running uniformly from 0.6 to 1.4. One can now more easily examine, in a systematic fashion, the variation in harvests of each crop, including its implications for revenue risk to tillage farmers, throughout the voluntary or first seven-year period of the tithe as a composition.

This procedure involves three steps. First, the annual harvest rat-

³⁶ P.M. Solar explained his choice of these two newspapers by observing that “there were other local agricultural reports published at one time or another in the early nineteenth century, but few were sustained as long as these two”. See Solar P.M., “Harvest Fluctuations in Pre-Famine Ireland: Evidence from Belfast and Waterford Newspapers”, in *Agricultural History Review*, vol. 37, no. 2, 1989, footnote 1, p. 157.

³⁷ See Solar (1989), p. 160, for his analysis of the reporters' interpretations of the harvest results.

ing is multiplied by the estimated average yield for each crop during this period, giving us an estimate of the harvests in hundredweights (cwt) per acre. These harvests are then multiplied by their respective average annual commodity prices to obtain an annual gross revenue figure per acre. Second, the estimated average composition tithing rate per region is subtracted from each gross revenue figure to obtain an estimate of the net revenue per crop per acre.³⁸ Third, the mean and the standard deviation in prices are calculated and analysed, while the median and the mean absolute deviation in harvest, gross revenue and net revenue ratings are calculated and analysed. These last two statistics are then compared with the same statistics for parishes that maintained the *modus decimandi*. Two points about this approach need elaboration:

- 1) the revenue figures, both on a gross and net basis, are obviously not cash amounts but quantifiable ratings denominated in shillings;
- 2) given that the harvest data are ordinal measures and cannot be presumed to conform to a normal distribution, the median and the mean absolute deviation should provide the best estimates of the annual crop revenue earned by these farmers (as a group, not individually) and the revenue risk assumed by tithe-payers, respectively.

Tables 3a through 4b show the results. It appears that, for both oats and potatoes, the estimated median harvest ratings of 1.0 in southeast Ireland for the entire period beginning in 1824 and ending in 1830 just met what was believed to be the norm. The median harvest rating for wheat of 0.8 was inferior to the norm, whereas the median harvest rating for barley of 1.2 was superior to the norm. More specifically, the harvests of 1824, 1827 and 1830 were rated as

³⁸ Alternative composition tithing rates (found in the Appendix) were used as well. For example, when using the lowest or the highest composition levels per parish found in the Appendix, it is interesting to note that the median net revenue ratings differ only slightly from those using the average regional composition rate, but the mean absolute deviations in net revenue per crop per region are identical.

exceptionally bountiful; only in 1826 was the tillage sector gripped by a general malaise. In the northeast, the median harvest rating of all four crops for the entire period as a whole either met or beat the norm: wheat (1.0), oats (1.0), barley (1.2) and potatoes (1.4). The harvests of 1824, 1825 and 1827 were rated as plentiful, though the years 1829 and 1830 saw the tillage sector suffer from substandard harvests. Commodity prices in both regions, on the other hand, were mostly stable and strong from 1824 to 1830. These prices fluctuated about their average for the period, except those of barley, which appear to have trended downward.

More central to this review, both the average annual commodity price and the annual harvest of all four crops across the two regions between 1824 and 1830 showed considerable variability. In terms of their estimated annual average, proportionately, wheat, oats and barley prices across northeast and southeast Ireland varied the least, with standard deviations of between 6.9 and 8.8 per cent of their respective means (i.e., as measured by their coefficient of variation). Potato prices, on the other hand, varied between three and four times more than those of the other three crops across southeast and northeast Ireland, with their standard deviation representing between 28.3 and 30.3 per cent of their respective means.

The harvest outcomes of these crops showed an even greater variability. The mean absolute deviations in harvests in southeast Ireland between 1824 and 1830 for wheat, oats, barley and potatoes were 0.25, 0.32, 0.19, and 0.20, respectively. In northeast Ireland, the mean absolute deviations in harvests for wheat, oats, barley and potatoes were 0.19, 0.20, 0.11, and 0.38, respectively. So, potato harvests in the northeast, followed by oats harvests in the southeast, displayed significantly greater unpredictability than the other selected crops during this period.

The product of the harvest rating, the crop yield and the annual price gives us the estimated gross revenue rating per acre (in shillings). In southeast Ireland, the median gross revenue ratings earned by wheat, oats, barley and potato farmers between 1824 and 1830 were 133.0, 73.2, 135.5 and 350.6 shillings, respectively. The re-

TABLE 3a
 Southeast Ireland Average Annual Prices, Harvest Ratings, *Modus Decimandi*
 and Composition Tithing Rates, and Estimated Annual Gross and
 Net Revenue Ratings for Wheat, Oats, Barley and Potatoes, 1824-1830

Year	Harvest Rating	Esti- mated Harvest (<i>h</i>)	Price (<i>s/cwt</i>) (<i>p</i>)	Esti- mated Gross Revenue (<i>p · h</i>)	Modus Decimandi		Composition	
					Tithing Rate (τ_{md})	Net Revenue ($p \cdot h - \tau_{md}$)	Tithing Rate (τ_{comp})	Net Revenue ($p \cdot h - \tau_{comp}$)
Wheat								
1824	1.40	18.6	11.67	216.6	10.50	206.1	1.23	215.4
1825	1.40	18.6	11.82	219.3	10.50	208.9	1.23	218.1
1826	1.00	13.3	10.93	144.9	10.50	134.4	1.23	143.7
1827	0.80*	10.6	10.21	108.3	10.50	97.8	1.23	107.1
1828	0.60	8.0	11.26	89.6	10.50	79.1	1.23	88.4
1829	0.80	10.6	12.54	133.0	10.50	122.5	1.23	131.8
1830	0.80	10.6	12.26	130.0	10.50	119.6	1.23	128.8
Median	0.80	10.6	11.67	133.0		122.5		131.8
Mean	0.97	12.9	11.53	148.8		138.3		147.6
Standard Deviation	0.31	4.2	0.80	50.6		50.6		50.6
Mean Absolute Deviation	0.25	3.4	0.62	39.5		39.5		39.5
Oats								
1824	1.40	15.5	6.61	102.4	8.00	94.5	1.23	101.2
1825	0.80	8.9	6.89	61.0	8.00	53.0	1.23	59.8
1826	0.60	6.6	7.79	51.8	8.00	43.8	1.23	50.5
1827	1.40	15.5	7.05	109.3	8.00	101.3	1.23	108.1
1828	0.60	6.6	6.13	40.7	8.00	32.7	1.23	39.5
1829	1.00	11.1	6.61	73.2	8.00	65.2	1.23	72.0
1830	1.40	15.5	6.68	103.6	8.00	95.6	1.23	102.3
Median	1.00	11.1	6.68	73.2		65.2		72.0
Mean	1.03	11.4	6.82	77.4		69.4		76.2
Standard Deviation	0.37	4.1	0.51	27.7		27.7		27.7
Mean Absolute Deviation	0.32	3.5	0.36	23.7		23.7		23.7

Notes: Prices are denominated in British shillings (*s*) per hundredweight (*cwt*); Average harvest yields are: wheat = 13.2 *cwt* and oats = 11.07 *cwt*; Harvest ratings are: 0.6 = "very poor," 0.8 = "poor," 1.0 = "average," 1.2 = "good," 1.4 = "very good," and * the harvest is difficult to classify; τ_{md} = *modus decimandi* tithing rate and τ_{comp} = average regional composition tithing rate.

Sources: Solar (1989), Table 1, p. 160; Kennedy and Solar (2007), Appendix Tables A.1 to A.6, pp. 129-156; Erck, in Dwyer (1833), Appendix D, pp. 47-101.

TABLE 3b
Southeast Ireland Average Annual Prices, Harvest Ratings, *Modus Decimandi*
and Composition Tithing Rates, and Estimated Annual Gross and
Net Revenue Ratings for Wheat, Oats, Barley and Potatoes, 1824-1830

Year	Harvest Rating	Estimated Harvest (<i>h</i>)	Price (s/cwt) (<i>p</i>)	Estimated Gross Revenue ($p \cdot h$)	Modus Decimandi		Composition	
					Tithing Rate (τ_{md})	Net Revenue ($p \cdot h - \tau_{md}$)	Tithing Rate (τ_{comp})	Net Revenue ($p \cdot h - \tau_{comp}$)
Barley								
1824	1.40	23.3	8.54	199.1	10.50	188.6	1.23	197.9
1825	1.00	16.7	7.80	129.9	10.50	119.4	1.23	128.7
1826	0.60	10.0	8.30	83.0	10.50	72.5	1.23	81.7
1827	1.20	20.0	7.66	153.1	10.50	142.6	1.23	151.9
1828	1.00	16.7	7.56	125.9	10.50	115.4	1.23	124.7
1829	1.20	20.0	6.84	136.7	10.50	126.2	1.23	135.5
1830	1.20	20.0	6.78	135.5	10.50	125.0	1.23	134.3
Median	1.20	20.0	7.66	135.5		125.0		134.3
Mean	1.09	18.1	7.64	137.6		127.1		136.4
Standard Deviation	0.25	4.2	0.67	34.7		34.7		34.7
Mean Absolute Deviation	0.19	3.1	0.50	22.0		22.0		22.0
Potatoes								
1824	1.00	127.9	2.31	295.1	10.16	284.9	1.23	293.9
1825	1.00	127.9	2.74	350.6	10.16	340.4	1.23	349.3
1826	1.00	127.9	3.50	447.6	10.16	437.4	1.23	446.3
1827	1.40	179.0	2.87	513.8	10.16	503.6	1.23	512.6
1828	1.40	179.0	1.27	227.4	10.16	217.2	1.23	226.1
1829	1.00	127.9	2.07	264.7	10.16	254.5	1.23	263.5
1830	1.40	179.0	2.50	447.6	10.16	437.4	1.23	446.3
Median	1.00	127.9	2.50	350.6		340.4		349.3
Mean	1.17	149.8	2.47	363.8		353.6		362.6
Standard Deviation	0.21	27.3	0.70	107.9		107.9		107.9
Mean Absolute Deviation	0.20	25.1	0.50	90.7		90.7		90.7

Notes: Prices are denominated in British shillings (s) per hundredweight (cwt); Average harvest yields are: wheat = 13.2 cwt and oats = 11.07 cwt; Harvest ratings are: 0.6 = "very poor," 0.8 = "poor," 1.0 = "average," 1.2 = "good," 1.4 = "very good," and * the harvest is difficult to classify; τ_{md} = *modus decimandi* tithing rate and τ_{comp} = average regional composition tithing rate.

Sources: Solar (1989), Table 1, p. 160; Kennedy and Solar (2007), Appendix Tables A.1 to A.6, pp. 129-156; Erck, in Dwyer (1833), Appendix D, pp. 47-101.

TABLE 4a
 Northeast Ireland Average Annual Prices, Harvest Ratings, *Modus Decimandi*
 and Composition Tithing Rates, and Estimated Annual Gross and Net
 Revenue Ratings for Wheat, Oats, Barley and Potatoes, 1824-1830

Year	Harvest Rating	Esti- mated Harvest (<i>h</i>)	Price (<i>s/cwt</i>) (<i>p</i>)	Esti- mated Gross Revenue (<i>p · h</i>)	Modus Decimandi		Composition		
					Tithing Rate (τ_{md})	Net Revenue ($p \cdot h - \tau_{md}$)	Tithing Rate (τ_{comp})	Net Revenue ($p \cdot h - \tau_{comp}$)	
Wheat									
1824	1.20	15.9	12.72	202.4	8.00	194.4	1.22	201.2	
1825	1.40	18.6	13.18	244.7	8.00	236.7	1.22	243.5	
1826	1.00	13.3	11.92	158.1	8.00	150.1	1.22	156.8	
1827	1.40	18.6	10.39	192.9	8.00	184.9	1.22	191.7	
1828	1.00	13.3	11.59	153.7	8.00	145.7	1.22	152.5	
1829	0.80	10.6	12.69	134.6	8.00	126.6	1.22	133.4	
1830	1.00*	13.3	13.00	172.4	8.00	164.4	1.22	171.2	
Median	1.00	13.3	12.69	172.4		164.4		171.2	
Mean	1.11	14.8	12.21	179.8		171.8		178.6	
Standard Deviation	0.23	3.0	0.99	36.9		36.9		36.9	
Mean Absolute Deviation	0.19	2.5	0.78	28.7		28.7		28.7	
Oats									
1824	1.20	13.3	7.53	100.1	5.42	94.7	1.22	98.9	
1825	1.20	13.3	7.56	100.5	5.42	95.0	1.22	99.2	
1826	1.00	11.1	7.94	87.9	5.42	82.5	1.22	86.7	
1827	1.40	15.5	8.49	131.6	5.42	126.2	1.22	130.4	
1828	0.60	6.6	6.60	43.9	5.42	38.4	1.22	42.6	
1829	1.00	11.1	6.83	75.6	5.42	70.2	1.22	74.4	
1830	0.80	8.9	7.50	66.4	5.42	61.0	1.22	65.2	
Median	1.00	11.1	7.53	87.9		82.5		86.7	
Mean	1.03	11.4	7.49	86.6		81.2		85.3	
Standard Deviation	0.27	3.0	0.64	28.2		28.2		28.2	
Mean Absolute Deviation	0.20	2.3	0.44	21.1		21.1		21.1	

Notes: Prices are denominated in British shillings (*s*) per hundredweight (*cwt*); Average harvest yields are: wheat = 13.2 *cwt* and oats = 11.07 *cwt*; Harvest ratings are: 0.6 = "very poor," 0.8 = "poor," 1.0 = "average," 1.2 = "good," 1.4 = "very good," and * the harvest is difficult to classify; τ_{md} = *modus decimandi* tithing rate and τ_{comp} = average regional composition tithing rate.

Sources: Solar (1989), Table 1, p. 160; Kennedy and Solar (2007), Appendix Tables A.1 to A.6, pp. 129-156; Erck, in Dwyer (1833), Appendix D, pp. 47-101.

TABLE 4b
Northeast Ireland Average Annual Prices, Harvest Ratings, *Modus Decimandi*
and Composition Tithing Rates, and Estimated Annual Gross and Net
Revenue Ratings for Wheat, Oats, Barley and Potatoes, 1824-1830

Year	Harvest Rating	Estimated Harvest (<i>h</i>)	Price (s/cwt) (<i>p</i>)	Estimated Gross Revenue (<i>p · h</i>)	Modus Decimandi		Composition	
					Tithing Rate (τ_{md})	Net Revenue ($p \cdot h - \tau_{md}$)	Tithing Rate (τ_{comp})	Net Revenue ($p \cdot h - \tau_{comp}$)
Barley								
1824	1.20	20.0	9.41	188.0	8.00	180.0	1.22	186.8
1825	1.20	20.0	9.15	182.8	8.00	174.8	1.22	181.6
1826	n.a.	n.a.	8.78	n.a.	8.00	n.a.	1.22	n.a.
1827	1.40	23.3	8.16	190.3	8.00	182.3	1.22	189.1
1828	1.00	16.7	7.56	125.9	8.00	117.9	1.22	124.7
1829	1.20	20.0	8.22	164.3	8.00	156.3	1.22	163.1
1830	1.00	16.7	7.66	127.6	8.00	119.6	1.22	126.4
Median	1.20	20.0	8.22	173.6		165.6		172.3
Mean	1.17	19.4	8.42	163.2		155.2		161.9
Standard Deviation	0.15	2.5	0.71	29.6		29.6		29.6
Mean Absolute Deviation	0.11	1.9	0.59	24.3		24.3		24.3
Potatoes								
1824	1.40	179.0	1.14	204.9	nil	204.9	1.22	203.7
1825	n.a.	n.a.	2.06	n.a.	nil	n.a.	1.22	n.a.
1826	n.a.	n.a.	2.52	n.a.	nil	n.a.	1.22	n.a.
1827	1.40	179.0	2.51	449.3	nil	449.3	1.22	448.1
1828	1.40	179.0	1.32	236.3	nil	236.3	1.22	235.1
1829	0.60	76.7	1.62	124.3	nil	124.3	1.22	123.1
1830	0.60	76.7	2.45	188.0	nil	188.0	1.22	186.8
Median	1.40	179.0	2.06	204.9		204.9		203.7
Mean	1.08	138.1	1.95	240.6		240.6		239.3
Standard Deviation	0.44	56.0	0.59	123.7		123.7		123.7
Mean Absolute Deviation	0.38	49.1	0.50	83.5		83.5		83.5

Notes: Prices are denominated in British shillings (s) per hundredweight (cwt); Average harvest yields are: wheat = 13.2 cwt and oats = 11.07 cwt; Harvest ratings are: 0.6 = "very poor," 0.8 = "poor," 1.0 = "average," 1.2 = "good," 1.4 = "very good," and * the harvest is difficult to classify; τ_{md} = *modus decimandi* tithing rate and τ_{comp} = average regional composition tithing rate.

Sources: Solar (1989), Table 1, p. 160; Kennedy and Solar (2007), Appendix Tables A.1 to A.6, pp. 129-156; Erck, in Dwyer (1833), Appendix D, pp. 47-101.

spective mean absolute deviations in estimated gross revenue ratings were 39.5, 23.7, 22.0 and 90.7 over the entire seven-year period. Therefore, as measured by the mean absolute deviation, potato farmers, because of both price and harvest fluctuations, were subject to the greatest revenue risk – estimated at between two and four times that of the other three crops – in southeast Ireland. In terms of the extent of revenue risk borne, potato farmers were followed, at a distance, by wheat, oats and barley farmers in that order.

In northeast Ireland, the median estimated gross revenue ratings earned by wheat, oats, barley and potato farmers over the same timeframe were 172.4, 87.9, 173.6, and 204.9 shillings, respectively. The respective mean absolute deviations in estimated gross revenue were 28.7, 21.1, 24.3 and 83.5. So, like their counterparts in the southeast, potato farmers in the northeast were subject to the greatest revenue risk – estimated at between three and four times that of the other three crops. In terms of the extent of revenue risk borne, as in the southeast, potato farmers in northeast Ireland were followed, at a distance, by wheat, barley and oats farmers in that order.

Before moving on to a review of net farm revenues, it is worth considering the tithing rate reductions extended to tillage farmers via the expansion of the new tithing to include pasture and wasteland. These reductions proved to be greater than originally planned, as they resulted not in a revenue-neutral composition but in a substantial reduction in the aggregate tithing revenues received by a parish. Table 5 compares the tithing rates imposed on the four selected commodities under the “old system” with those under composition. The latter were levied on as many as nine grades of land.³⁹ The tithing rates on cereal crops in southeast Ireland, which varied from as little as 8s to as much as 12s per statute acre before composition, were reduced to as low as an average of 11½d per statute acre on medium-

³⁹ The tithing rates on land designated as “poor quality” are not included in the calculation since a portion of this land (and its three grades) was most likely not under tillage before a composition was established and, therefore, it was newly tithable and not directly comparable to tithing rates prior to composition.

quality land to a high of 2s 4d per statute acre on good-quality land, reductions of 88 and 71 per cent, respectively. For potato farmers in the southeast, tithing rates of between 10s and 10s 4d were reduced to as low as an average of 11½d on medium-quality land, a reduction of 90 per cent. By comparison, the tithing rates on cereal crops in northeast Ireland, which varied from 5s 5d to 8s per acre, were reduced to as low as an average of 7½d per acre on medium-quality land and to a high that averaged 3s per acre on high-quality land, reductions of 92 and 63 per cent, respectively. Potato farmers in the northeast, on the other hand, saw their tithe-free status come to an end. As a consequence, the tithing rate schedule of east Ulster, which had been generally lower than that of southeast Ireland before composition, ended up very similar in its breadth.

Returning now to Tables 3a through 4b, the *modus decimandi* and composition tithing rates for each of the four selected crops in both regions of Ireland are provided in order to calculate the net revenue ratings per acre. For southeast Ireland, the *modus decimandi* was 10.5s, 8s, 10.5s and 10.16s for wheat, oats, barley and potatoes, respectively, compared to an average tithe under composition of 1.23s,

TABLE 5
Selected County and Regional Tithing Rates per Statute Acre Under the *Modus Decimandi* and the Composition Tithe

Regime	Criterion	Modus Decimandi			Composition Tithe	
		Wheat & Barley	Oats	Potatoes	Medium Quality Land	Good Quality Land
Carlow		n.a.	n.a.	n.a.	1s 4¼d	
Kilkenny		10s	8s	10s	1s 3d	2s 4d
Wexford		12s	8s	10s	11½d	1s 5¾d
Tipperary (southern district)		10s 6d	8s	10s 4d	1s 3d	
Waterford					1s 3½d	
Antrim					7½d	1s 5d
Armagh		8s	5s 5d	nil	1s 1½d	3s
Down					1s 8¼d	2s 11d

Source: Erck, in Dwyer (1833), Appendix D, pp. 47-101.

no matter the crop. For northeast Ireland, the *modus decimandi* was 8s, 5.42s and 8s for wheat, oats and barley, respectively, compared with an average composition tithe of 1.22s, no matter the crop.⁴⁰

These data brings us now to net revenue ratings. Beginning with these ratings as set out under the composition regime (i.e., the last column in Tables 3a through 4b). The median net revenue rating earned by wheat, oats, barley, and potato farmers in southeast Ireland from 1824 to 1830 was 131.8, 72.0, 134.3 and 349.3 shillings per acre, respectively. Their respective mean absolute deviations in net revenue ratings were 39.5, 23.7, 22.0 and 90.7. In the northeast, the median net revenue rating earned by wheat, oats, barley, and potato farmers from 1824 to 1830 was 171.2, 86.7, 172.3 and 203.7 shillings per acre, respectively. Their respective mean absolute deviations in net revenue ratings were 28.7, 21.1, 24.3 and 83.5. Hence, in all of the above cases, the net revenue rating risk is the same as the gross revenue risk and, once again, potato farmers were subjected to the greatest level of revenue risk, followed at a distance by cereal crop farmers.

In comparison to the composition tithe regime, the *modus decimandi* regime produced the following results from 1824 to 1830: wheat, oats, barley, and potato farmers in southeast Ireland recorded median net revenue ratings of 122.5, 65.2, 125.0 and 340.4 shillings per acre, respectively, while their respective mean absolute deviations in net revenue ratings were 39.5, 23.7, 22.0 and 90.7; and wheat, oats, barley, and potato farmers in northeast Ireland recorded median net revenue ratings of 164.4, 82.5, 165.6 and 204.9 shillings per acre, respectively, while their respective mean absolute deviations in net revenue ratings were 28.7, 21.1, 24.3 and 83.5. In the end, the *modus decimandi* regime entailed the same revenue risk as the composition regime but far lower net revenues.

⁴⁰ These figures are calculated using the simple average of county tithing rates found in Erck, in Dwyer (1833), Appendix D, pp. 47-101. The diversity of composition tithing rates assessed in nine sample parishes in specific counties across most of southeast and northeast Ireland is given in the Appendix.

Quite clearly, these results show that potato farmers/cottiers with small farms/lots bore extremely large revenue risks (both on a gross and net basis) compared with cereal crop farmers under both the *modus decimandi* and the composition regimes. These results further suggest that although cereal crop farmers and potato farmers may have had a shared interest in lower tithing rates, the magnitude of the reductions required to compensate them for the assumed revenue risks might have been very different. Part and parcel with such a difference would be the acceptable terms for converting a parish's tithe to a composition. Indeed, this difference in risk conditions and compensation terms may also explain why many parishes dominated by potato farmers/cottiers chose to forgo the lower tithing rates under the composition regime and stuck with the *modus decimandi* and its tithing rate adjustment process upon an extremely poor harvest. This feature of the *modus decimandi* regime would be helpful to southeast barley farmers in 1826, southeast wheat farmers in 1828, southeast oats farmers in 1826 and 1828, and northeast oats farmers in 1828.

In the final analysis, between 1824 and 1830, the tithe-composition regime offered net revenue gains over the *modus decimandi* regime for farmers of all four crops in northeast and southeast Ireland, except potato farmers in the northeast who had not been charged a *modus decimandi*. The average annual net revenue gains and losses from the shift from the *modus decimandi* to the composition tithe between 1824 and 1830 were:

	Southeast	Northeast
Wheat	7.5%	4.0%
Oats	10.3%	4.8%
Barley	7.9%	4.0%
Potatoes	2.6%	-0.7%

These results, which are short term in nature, were achieved with no or, at most, a negligible increase in revenue risk over that

prevailing under the *modus decimandi* regime.⁴¹ However, over the longer term, when leases expired and were renewed, land rents could be expected to rise (fall) by approximately the same amount as the reduction (increase) in tithes and, therefore, these windfall gains and losses would be appropriated by landlords.⁴²

Undoubtedly, these improved short-term financial returns to tillage farming induced many parishes that were dominated by cereal crop operations to convert their tithe into a composition. They would also go a long way to achieve three parliamentary objectives:

- 1) mobilize resources for greater economic exploitation of Irish land, mostly by making improvements to wasteland;
- 2) stimulate a shift of resources from grazing to tillage and thereby procure a greater supply of foodstuffs for Great Britain;
- 3) secure a more predictable income for the Church of Ireland clergy so as to encourage a greater clerical residency rate in Ireland.

However, the reform failed to address small farmers' and cottiers' concerns over the heightened revenue risks they would continue to bear. Like the *modus decimandi* before it, the composition tithe imposed approximately 11.1 per cent more revenue risk on tithe-paying crop farmers than did the tithe in kind. The refusal to adopt a composition in many parishes dominated by small farmers and cottiers⁴³ indicates that a larger short-term financial windfall would have been required to justify the bearing of the same level of revenue risks as under the *modus decimandi* (but additional to that under the tithe in kind). This condition was not achieved until a political compromise was reached in 1838.

⁴¹ Had the tithe in kind still been in place between 1824 and 1830, the mean absolute deviations in net revenues per acre for wheat, oats, barley and potatoes in southeast Ireland would have been 35.6, 21.4, 19.8 and 81.6, respectively. The mean absolute deviations in net revenues per acre for wheat, oats, barley and potatoes in northeast Ireland would have been 25.9, 19.0, 21.8 and 75.2, respectively. Hence, the added revenue risk associated with the composition tithe relative to that of the tithe in kind was 11.1 per cent across all four crops throughout Ireland – the same as under the *modus decimandi*.

⁴² Shaw (2015).

⁴³ See Shaw (2018), p. 134.

5. Conclusion

The acceptance of the *modus decimandi* for more than a half century, from the late 1700s until the early 1800s, demonstrates that Irish tillage farmers had, in principle, no substantive economic quarrel with the commutation of the tithe in kind to its monetary equivalent; after all, it was the landlord who ultimately bore its economic burden by way of lower rent rates. However, the actual implementation of this monetary tithe was no doubt a matter of concern for many tillage farmers. Unlike the tithe in kind, the *modus decimandi* did not always preserve its customary 90%-10% split in annual crop revenue between the tillage farmer and the clergy. Relative to the market value of an acre's production of a tithable article, the *modus decimandi* systematically generated disproportionately high tithing rates when the harvest was poor and disproportionately low tithing rates when it was superior. The basic deficiency of this monetary tithe was that, instead of being applied to the farmer's harvest, it was levied on mid-season estimates of the forthcoming harvest that were based on insufficiently accurate weather forecasts and historical crop yields drawn from highly variable population sets. As a result, the monetary tithe shifted part of the revenue risk, mostly attributable to variable crop yields, from the tithe-owner to the tithe-payer, a risk that many small farmers and cottiers were unable to mitigate.

When tithe agents insisted on collecting in full on the promissory notes they held (which were based on mid-season harvest assessments) even after an unexpectedly poor harvest, their actions could have been interpreted as unfair or even as gouging, but the agents could also have been seen as making up for the less than 10 per cent they collected upon a superior harvest. Apart from these conflicting perspectives, for small farmers and cottiers unable to save the windfall revenues from a bountiful harvest so as to be able to spend these resources upon a poor harvest and thus smooth their lifetime consumption, the uncompromising actions taken by tithe agents could have exacerbated the severe financial distress they suffered from a poor harvest. Without commensurate compensation (or a crop insurance

plan like those that many countries deploy today), risk-averse tillage farmers were net losers under the conversion of the tithe from an in-kind payment into a monetary payment (regardless of whether the latter was the *modus decimandi* or a land tax based on a composition).

In the end, it is unclear whether the objective of the monetary tithe – a reduction in the clergy's transactions costs – was universally achieved. The tithe in kind generated one minor protest while in force for more than 200 years. The *modus decimandi*, on the other hand, was the principal grievance of four protracted regional agrarian disturbances and a secondary grievance in numerous other protests over the roughly 65 years during which it was in effect. In at least 17 of the 64 years between 1760 and 1823, or about 27 per cent of the time, the *modus decimandi* produced conflict somewhere in the south and west of Ireland, sometimes with deadly consequences. From a general economic welfare perspective, the social costs associated with these conflicts may have outweighed any savings in private-party transactions costs.

In general, it could be argued that the tithe act of 1823 was successful in achieving most of its objectives in parishes where the reform was voluntarily agreed upon and put into effect. However, even this view is subject to dispute, as the generally good harvest record in the southeast of the country during the mid-1820s to 1830, particularly for potatoes, may have masked the heightened adverse risks associated with the reform and, therefore, proved to be moot during this period. The adverse risks would only become apparent later, when the harvests were not so favourable. More telling still, the failure to adopt the tithe act of 1823 country-wide suggests that the reform fell short of improving the balance between economic welfare and equity objectives compared with the *modus decimandi* in many parts of the country. Regional economic disparities confounded the act's universal appeal.

More pointedly, it is quite plain that the Irish tithe act of 1823 did not answer the tithe-payers' principal complaint about the *modus decimandi*. In trying to come up with a solution to the sporadic civil protests against the monetary tithe and its agents, parliamentarians

clearly misunderstood the nature and complexity of the equity issue confronting them. A review of the debates in the Houses of Commons and Lords on the Composition for Tithes Act of 1823 reveals that parliamentarians mistakenly believed that:

- 1) the controversial implementation of the monetary tithe was largely the consequence of questionable tithe proctor practices;
- 2) the principal, if not the only significant, equity problem of the monetary tithe lay in its discriminatory treatment between tillage farmers and graziers.

Given these assessments, parliamentarians believed that the solution to the dispute lay in:

- the setting of a composition by the clergy and parishioner representatives, which would eliminate the involvement of proctors altogether;
- a significantly lower tithe burden for tillage farmers, which would ensue from distributing the tithe obligation more broadly across the Irish farming community.⁴⁴

But the chosen solution to switch from an ad valorem production tax like the *modus decimandi* to a lump-sum land tax, such as a tithe based on a parish composition, did not address a more important but overlooked issue of inequity – a problem that was first brought centre stage with the switch from the tithe in kind to the monetary tithe. The most relevant equity issue was not the tithe's differential of incidence between tillage farmers and graziers, which the tithe act clearly narrowed, but the disparate financial capacity of large versus small-scale tillage farmers in bearing a tax not directly tied to revenue. The consequence of this oversight inevitably led to policy failure – a failure to improve upon the existing balance between economic welfare and equity – and another round of civil protest and disturbances with the attendant lost and injured lives, not to mention the increased “excess death” rates incurred during the longest string of poor potato harvests in Irish history, the “Great Famine” of 1845 to 1850.

⁴⁴ Sir J. Newport, *Hansard*, London, 6 March 1823, 8 cc. 494-501; Lord Stanley, *Hansard*, London, 5 July 1832, 14 cc. 95-138; and Second Report of the House of Commons Select Committee on Tithes in Ireland (1832), p. 245-iv.

APPENDIX

The Tithe Data of Nine Random Parishes that Converted from the *Modus Decimandi* to a Composition from Three Counties in Southeast Ireland

County	Diocese Parish	Gross Composition			Applotted Acreage	Average Tithe		
		£.	s.	d.		s.	d.	Shillings
Carlow	Leiglin							
	Ballyellin	413	1	6½	4,754	1	8¾	1.74
	Glonmulsk	230	15	4¾	3,102	1	5¾	1.49
	Hacketstown	553	16	11	11,593	0	11½	0.96
	Myshall	400	0	0	9,220	0	10½	0.87
	Nurney	230	15	4¾	2,658	1	8¾	1.74
	Rathmore	160	0	0	2,374	1	4¼	1.35
	Rathvilly	784	12	3¾	9,103	1	8¾	1.72
	Ullard	258	9	2¾	4,989	1	0½	1.04
	Wells	230	15	4¾	2,663	2	11½	1.73
Total/Average	3,423	16	11½	50,456	1	4¼	1.36	
Kilkenny	Leighlin							
	Callan	550	0	0	4,712	2	4	2.33
	Coolraheen	200	0	0	2,768	1	5¼	1.45
	Donamagin	184	12	3¾	3,498	1	0½	1.06
	Fartagh	392	6	1¾	6,354	1	2¼	1.23
	Gowran	507	13	10¼	6,084	1	8	1.67
	Kilmanagh	323	1	6½	5,355	1	2½	1.21
	Mallardstown	171	1	8¼	2,492	1	4½	1.37
	Mothell	369	4	7½	6,621	1	1¼	1.12
	Rower	560	0	0	10,530	1	0¾	1.06
Total/Average	3,258	0	1½	48,414	1	4	1.35	
Wexford	Ferns							
	Ambrosetown	138	9	2¾	2,175	1	3¼	1.27
	Edermine	276	18	5½	3,953	1	4¾	1.40
	Ferns	830	15	4¼	15,084	1	1¼	1.10
	Kilkevan	369	4	7½	8,935	0	9¾	0.83
	Killegney	304	12	3¾	6,531	0	11¼	0.93
	Kilnehue	456	16	9¾	14,805	0	7¼	0.62
	Old Ross	522	16	11	10,812	0	11½	0.97
	Rossdroit	590	15	4½	8,002	1	5¼	1.48
	Templeshambo	1,200	0	0	33,099	0	8¾	0.73
Total/Average	4,690	9	1¼	103,396	0	10¼	0.91	

Source: Erck J.C., in Dwyer G., *A View of Evidence on the Subject of Tithes in Ireland, Given Before the Committees of the House of Lords and Commons*, Edinburgh, 1833, Appendix D, pp. 47-91.

APPENDIX

The Tithe Data of Nine Random Parishes that Converted from the *Modus Decimandi* to a Composition from Three Counties in Northeast Ireland

County	Diocese Parish	Gross Composition			Applotted Acreage	Average Tithe			
		£.	s.	d.		s.	d.	Shillings	
	Connor								
	Ahoghil	1,015	7	8¼	18,312	1	1¼	1.11	
	Ballyeaston	200	0	0	13,078	0	3¾	0.31	
	Ballymarton	150	0	0	2,655	1	1½	1.13	
Antrim	Ballymoney	1,015	7	8¼	14,246	1	5	1.43	
	Billy	489	4	8	12,457	0	9¼	0.79	
	Camlin	151	18	0	5,455	0	6½	0.56	
	Glanavy	172	17	4	6,919	0	6	0.50	
	Racavan	295	17	4½	9,522	0	7½	0.62	
	Skerry	419	10	3¼	15,779	0	6¼	0.53	
	Total/Average	3,910	3	0¾	98,423	0	9½	0.79	
		Armagh							
		Derrinoose	646	3	1	13,801	0	11¼	0.94
	Dunbyn	200	0	0	1,200	3	4	3.33	
	Keady	350	0	0	8,366	0	10	0.84	
Armagh	Tynan	800	0	0	15,960	1	0	1.00	
	Ballymore	1,000	0	0	12,800	1	6¾	1.56	
	Creggan	1,050	0	0	16,342	1	3½	1.29	
	Drumcree	650	0	0	11,630	1	1½	1.12	
	Forkhill	650	0	0	6,000	2	2	2.17	
	Newtonhamilton	582	15	1½	6,708	1	9	1.74	
	Total/Average	5,928	18	2¼	92,807	1	3¼	1.28	
		Dromore							
	Annahilt	367	5	4	3,787	1	11¼	1.94	
	Dromaragh	973	4	8	11,000	1	9¼	1.77	
	Drumballyroney	482	0	0	7,286	1	4	1.32	
	Drumgooland	435	7	2½	9,100	1	11½	0.96	
Down	Down								
	Kildief	214	11	6¼	1,586	2	9	2.71	
	Killileagh	795	0	0	9,371	1	8¼	1.70	
	Loughinisland	550	0	0	7,200	1	6¼	1.53	
	Seapattrick	733	8	4	5,028	2	11	2.92	
	Tullylish	422	8	1	7,323	1	2	1.15	
	Total/Average	4,973	5	2	61,681	1	7¼	1.61	

Source: Erck J.C., in Dwyer G., *A View of Evidence on the Subject of Tithes in Ireland, Given Before the Committees of the House of Lords and Commons, Edinburgh, 1833, Appendix D, pp. 47-91.*

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