

***Complementarity, Competition and Institutional Development:  
The Irish Loan Funds through Three Centuries***

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Ireland's loan funds were a long lived, self-sustaining, large-scale microcredit organization that made millions of loans, without collateral, to the poor. We examine the life-cycle of this institution and show how the loan funds responded to their economic environment in ways that benefitted Ireland but diminished the demand for the funds' services. During their first 100 years, a period of growth ending in the 1840s, they adapted constantly to reflect their changing environment, and were successful in obtaining improvements to their legal structure because they were complementary to the banking system and were seen as an effective method of relieving poverty. In contrast, in their second hundred years, they became ossified, perhaps because the commercial banks had become direct competitors. We see in their progress through 200 years an example of Douglass North's contention that institutions change incrementally and, when they are successful, often change the framework within which they operate.

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The central issue of economic history and of economic development is to account for the evolution of political and economic institutions that create an economic environment that induces increasing productivity. — Douglass North, 'Institutions', p.98

Beginning in the early eighteenth century a network of local, independent, and charitably constituted microcredit operations, or loan funds, arose in Ireland in the face of undercapitalization to provide a form of poverty relief and small scale economic development for the rural poor.<sup>1</sup> Since the poor were geographically mobile, and had little or no experience with formal credit and effectively no collateral, the potential for complete market failure was substantial. Over time, however, loan funds developed mechanisms to enforce repayment, reduce transactions costs, assuage moral hazards and overcome problems of asymmetric information and credibility. The loan fund system thus grew to prominence and in the mid-nineteenth century extended about 500,000 loans annually. Following the Irish Famine, it slowly shrank and finally disappeared in the mid-twentieth century.

Although the system served as a financial intermediary to the poor in Ireland for over 200 years, and has similarities to microcredit operations in developing countries today, it has received little attention from economic historians. Ó Gráda ignores it in his otherwise excellent recent economic history of Ireland. Mokyr dismisses the loan funds with a quotation from the 1845 Devon commission suggesting the best that can be said of them is 'that they are less ruinous than private usurers'.<sup>2</sup> Barrow mentions the funds, in passing, as being 'inadequate to the massive problem of rural Irish poverty' as if one institution could be expected to turn a country around.<sup>3</sup> A more positive, although only marginally longer, treatment is provided by Black who interprets an 1854 Select Committee as recognizing problems, and suggesting improvements, but 'approv[ing] the principle of the funds as conferring substantial benefits on small farmers and traders'.<sup>4</sup>

Our goal is to trace out and analyze the life-cycle of this institution: why did it grow to be so large, then abruptly stop growing and slowly decline?<sup>5</sup> We show that its rise was helped by two key factors: first, until 1843 loan funds were perceived favorably by the wealthy elite of Ireland who saw in them an instrument to reduce poor taxes; second, they offered little competition to the commercial banks. Thus incentives for both legislative support and 'grassroots' volunteerism coexisted. Further, as the system grew, its larger scale allowed improved mechanisms and greater efficiency which in turn generated more growth. Paradoxically, this tremendous growth was one of the prime causes of the system's decline. By the early 1840s, the network was similar in scale to one of the joint stock banks and growing rapidly; collectively the funds posed a real threat to the banks. New legislation constraining the loan funds ensued and it was, unpredictably and to the detriment of the funds, followed immediately by the Great Famine of the late 1840s. As Ireland grew richer and less populous in the latter half of the century, the funds lost their comparative advantages in information and enforcement relative to the banks.

The evolution of this institution offers an illuminating case study of modern theories of institutional development (such as those proposed by Douglass North) and rural organization (such as the studies in Hoff, Braverman and Stiglitz) which are becoming increasingly interdependent. A recent survey of this area by Lin and Nugent laments the paucity of studies of institutional change in developing economies. By examining this institution over a long period, insights relevant to the design of similar institutions in developing countries today can be obtained that are not normally available from an inspection of most current institutions' relatively short lives. We proceed by reviewing the history of the loan fund system and then briefly discussing how theories of institutional change illuminate its evolution.

## I

Ireland's loan fund system owes its origin to Dean Jonathan Swift who, recognizing that many poor individuals have projects with a high return on capital and are creditworthy despite their lack of physical collateral, created a small loan fund:

The first five hundred pounds he could call his own, he lent out to poor industrious tradesmen in small sums of five, and ten pounds, to be repaid weekly, at two or four shillings, without interest. ... In order to insure this fund from diminution, he laid it down as a rule that none should be partakers of it, who could not give good security for the regular repayment of it in the manner proposed; for it was a maxim with him, that any one known by his neighbours to be an honest, sober, and industrious man, would readily find such security; while the idle and dissolute would by this means be excluded. Nor did they who entered into such securities run any great risque; for if the borrower was not punctual in his weekly repayments, immediate notice of it was sent to them, who obliged him to be more punctual for the future. Thus did this fund continue undiminished to the last.<sup>6</sup>

Sheridan also notes that Swift was willing to sue for repayment when the borrower's cosignatories were unsuccessful.<sup>7</sup> Swift addressed problems that remain ubiquitous in modern microcredit: asymmetric information in the screening of borrowers, moral hazard and enforcement. Four components of Swift's lending scheme endured: small loans, weekly repayments, cosignatories but not physical collateral, and the force of law to obtain repayment if necessary. Many successful modern microcredit schemes, such as the Grameen Bank, have similar characteristics.<sup>8</sup>

Inspired by Swift's success, other individuals set up associations by voluntary subscription.<sup>9</sup> Notably, the Dublin Musical Society, using profits from musical performances,

began in 1747 to make loans 'upon the same system as Dean Swift'<sup>10</sup> and was incorporated for the purpose in 1756. By 1768, they had made loans of £2 to £4 to 5290 different borrowers.<sup>11</sup> Their success induced an Act in 1778 which allowed the Musical Society to appoint persons in other towns 'to receive contributions, and to lend out such sum or sums of money interest free' to 'indigent and industrious manufacturers'. Liquidity constraints motivated this form of charity:

there are always a great number of industrious tradesmen, who from their extreme poverty are unable to support themselves and families ... for want of money to buy materials and other necessaries for carrying on their respective trades; whereby several of that useful class of men have perished, and their families reduced to beggary and become a burthen to the publick.<sup>12</sup>

While expansion proved unsuccessful, the Musical Society continued to operate in Dublin, making loans to 2871 persons (with families of 14,010) between 1780 and 1800, and loans to another 3571 persons by 1844.<sup>13</sup>

The founding of 'a great number' of other loan funds ensued.<sup>14</sup> In 1792, Charles Laurent promoted 'A scheme for establishing general charitable loans throughout Ireland' according to which charitable gifts would be matched by tax monies, again using Swift's lending format.<sup>15</sup> A loan fund established in Derry in 1809 raised £650 through charity sermons in Established, Catholic and Quaker churches for lending to weavers, glaziers, carpenters, basketwomen, bakers, colliers, poor housekeepers and the like, and by 1822 had made loans to 6687 individuals.<sup>16</sup> The Meath loan fund charity was established in 1808 in Dublin with capital of £1200 'to enable poor Artizans to purchase materials for manufacture', and in ten years, it made 1500 loans under £5, had suffered 20 defaults, and 'raised above 200 distressed journeymen weavers.... to the rank of Masters'.<sup>17</sup> There were several other loan funds in Cos. Wexford, Kilkenny and Cork.<sup>18</sup> In

contrast to the success of so many local funds, the failure of the Musical Society's expansion effort points to the importance of 'localness' in overcoming information and screening problems, although the low degree of monetization outside the capital may also have played a role in the early period.

These attempts to relieve poverty and encourage entrepreneurship through credit occurred in the context of substantial debate over, and innovation in, Ireland's financial system. In 1783 the Bank of Ireland was formed as the first large and credible bank, and by 1800 paper money substituted for specie with scores of banks and quasi-banks issuing notes.<sup>19</sup> In the less formal pawnbroking market, usury laws were loosened in 1786 to allow interest rates up to 30%.

## II

In 1822 a severe famine in Ireland drew considerable attention, and private donations of over £300,000 were given to a London committee 'for the relief of the distressed Irish'. Owing to the committee's failure to distribute all this money expeditiously, £55,000 was left over after the famine. Having no clear mandate for the remainder, the committee emulated the Musical Society, and established the Irish Reproductive Loan Fund Institution 'for the purpose of making small loans at interest to the industrious poor' with a maximum loan size of £10.<sup>20</sup> The ten worst affected counties in Ireland each received a share of the £55,000, with the intent that ten boards of trustees should gratuitously supervise 'local associations' in their counties. To prevent the funds from degenerating to the standards of the notorious 'gombeenmen' or moneylenders, the managers were strictly prohibited from obtaining 'any salary, allowance, profit or benefit whatsoever', though clerks could be remunerated.

Because of the size of the donation, and the Reproductive Institution's intention to charge interest, a bill was promulgated in Parliament in 1823 'to give protection to the funds of such

Institutions, and to afford encouragement to the formation of other Institutions of a like kind'.<sup>21</sup> Funds were permitted to charge interest, and were exempted from the Stamp Tax, a fee required to make contracts enforceable by a Justice of the Peace instead of the slower Quarter Sessions. This effectively made them preferred creditors and strengthened the funds' enforcement mechanism. Besley ( p. 2195) discusses the relative merits of government interventions in modern microcredit; the stamp tax exemption appears to have been very successful in expanding the scope of intermediation by improving enforcement conditions.

Charging interest was a crucial innovation, whose rationale appears to have been to allow funds to meet administrative expenses, be cushioned against defaults, and even grow over time if interest exceeded defaults and expenses. It also induced efficient self-selection among recipients since only those whose expected return exceeded the interest rate would wish to borrow. Relatedly, some nineteenth-century reformers, politicians and economists concerned about economic incentives mistrusted pure charity since it robbed institutions, and the poor, of the incentives to make good business decisions. For example, Harriet Martineau, the well known popularizer of political economy, wrote that except in cases of sudden accidents and rare infirmities, 'all arbitrary distribution of the necessaries of life is injurious to society, whether in the form of private almsgiving, public charitable institutions, or of a legal-pauper system.'<sup>22</sup> Charging interest, therefore, in addition to affecting screening and incentives, may also have alleviated some concern among donors to (and later depositors in) loan funds.

Allowing interest to be charged on loans also had unintended results. The 1823 legislation explicitly forbade persons who had formed a loan society from obtaining any benefit from its capital or interest. At first funds seem to have followed this stricture literally, but as time progressed they discovered that they could expand their operations by accepting deposits *at*

*interest* and lending the proceeds at a profit. Funds were thus transformed from small charities into quasi-banks. For example, Tyrrell's Pass Loan Fund in Co. Westmeath started in 1824 with capital of £26 advanced by one family, and by 1834 other contributions increased the amount to £141. In that year, it started accepting deposits at 6%, and within six months had attracted £800. By 1836, it had capital of £237, deposits of £1763, and had made loans with a face value of £20,290.<sup>23</sup> This is an example of North's contention that accidents, such as the unintended implications of the Bill of 1823, can put incentives in place that induce entrepreneurs, maximizing under a new set of constraints, to produce institutional change.<sup>24</sup> Institutional — like biological — evolution can result from random permutations with successful ones being adopted.

The 1823 loan fund Bill was part of a more general financial liberalization, which included legislation in 1824 to promote joint-stock banking.<sup>25</sup> Several banks formed, expanded quickly, and within 20 years there was a bank branch in almost all large towns. Their principal functions were collecting deposits (on which they paid interest up to 2%), financing short term trade credit, and purchasing British government bonds. Prior to the 1860s they were not active in making loans under £10, and appear to have dealt almost exclusively with the richest third of the population, thus in this period they competed against the funds only for mid-sized deposits.<sup>26</sup> Attempts were made by the Agricultural and Commercial Bank, and the Provident Bank to enter into the market for small loans in the mid-1830s. Both failed within two years apparently due to poor management. Joint-stock banking facilitated a significant increase in the monetization of the Irish economy, which in turn assisted the development of the loan fund system. In some cases banks even made deposits in loan funds.<sup>27</sup> The relationship between banks and funds is addressed more thoroughly in Hollis and Sweetman, in which we note that each operated in different 'niche' markets in the early part of their histories.

### III

Three important issues affected the development of the loan funds following 1822. First, the government was concerned that the 1823 legislation was inadequate to regulate the rapidly growing system. The 1823 Bill was designed to regulate a charitable system of lending, not of deposits, and many funds were making large profits that were being 'swallowed up by expensive and irresponsible management'.<sup>28</sup> Second, the economy was becoming monetized and the importance of credit was increasingly recognized. Third, with rapid industrialization and high rural unemployment, the 1830s was a period of intense legislative activity directed at alleviating poverty and placating the poor throughout the United Kingdom. The possibility of having to fund a Poor Law similar to the English one of 1834 'filled many [Irish] taxpayers with horror'.<sup>29</sup> Loan funds were perceived as an inexpensive form of self-sustaining poverty relief, both through their loans and because their profits could support schools and hospitals. A commission to inquire into the condition of the poor in Ireland recommended in 1836 that a 'loan fund ... be established in every district'.<sup>30</sup> Ireland's Poor Law was finally passed in 1838.

Legislation regarding loan funds was passed in 1836 and 1838, the principal effect of which was to create a central monitoring and regulatory body, the Loan Fund Board, which collected information about each fund, disseminated knowledge about good practices, and could close funds operating improperly.<sup>31</sup> The 1836 legislation also *required* loan funds to give half their profits to some charity, such as a local hospital, which substantially extended their role in reducing the public burden of poverty. Although many funds made substantial donations, data from the Board's reports suggest this provision was not enforced universally. This legislation seems to have stimulated the loan fund system beyond the expectations of its formulators. By 1839 loans totaling £816,000 were being made by 224 funds registered with the Board. In 1843,

there were 300 funds, not including the 50 - 100 funds under the Reproductive Institution, and their lending totaled £1,645,000. Figures 1 and 2 show the spectacular growth in loan fund numbers and lending volume over this period.

This considerable expansion can be attributed to at least three factors. First, the legislation legitimized paying interest on deposits, setting a maximum interest rate of 6%, three times as high as rates at deposit accounts in joint-stock banks. Deposits were designed to be flexible, with most in the form of £5 and £10 debentures 'so that they can be readily transferred' between individuals. Second, the Board provided guidance in founding and operating a loan fund and minimized the expertise required by offering standardized rules, a complete system of accounting and even stationary. Trustees and officers were also specifically freed from personal liability for the fund's debentures.<sup>32</sup>

Third, the Board's monitoring and regulatory functions reassured depositors about fund creditworthiness. Depositors were aided in minimizing fraud and incompetence by fund managers and clerks through the Board's dissemination of information and by its inspection of funds. Inspections were sometimes thorough, but often not; they became much improved after the Board became more active in the 1850s.<sup>33</sup> However, even then, it appears that inspectors gave notice to the fund of their visits, which would have allowed some scope for fraud.<sup>34</sup> The 1823 Act had permitted clerks 'such salaries and allowances, or other necessary expenses' as provided by each funds' rules, but, with no supervision of those rules, they might be very profitably determined by the clerk himself. Under the revised legislation loan funds submitted their rules to the Board for approval, and limits on remuneration for clerks were imposed. Funds in breach of the laws were given notice, and if they failed to reform, could be closed; failure to comply disabled the fund from taking legal action to recover loans. (The loan funds founded and supposedly regulated by

the Reproductive Institution were exempted from registering with the Board.<sup>35</sup>) Finally, the government offered some slight support to the Board: it provided accommodation in Dublin Castle, the administrative seat of government in Ireland, and paid the salary of the secretary plus some incidental expenses.<sup>36</sup> This seems to have caused many depositors to falsely believe that the funds were backed by the government.<sup>37</sup> Despite its limitations, this movement to third party enforcement by an active and specialized monitoring agency was a major innovation that increased both fund efficiency and depositor confidence, the latter being crucial to the growth of the system in this period.

#### IV

A brief overview of loan fund intermediation practices is now presented. Each fund was independent and operated in a district of radius 5 or 10 miles. Capital comprised donations, interest free loans and retained profits; deposits were typically about 10 times as large as capital. Fund managers were unpaid, and may or may not have been active, but daily operations were performed by paid clerk(s). Loans were between £1 and £10, averaging about £4 in the 1840s, or a little less than the estimated per capita income of the poorer 66% of the population,<sup>38</sup> and were made at interest rates varying from 8% to 13%. Table 1 shows the stated occupations of borrowers from a small fund in Co. Mayo. Borrowers were from the poorest classes: smallholders, weavers, traders, and labourers; and a significant proportion were women. Very few changes to fund operations occurred following the early 1840s.

Loans were intended to be 'reproductive' in the sense that the item financed should generate a cash flow from which repayments could be made, although this was not always the case. Every borrower was required to have two 'bailsmen' or cosignatories who were jointly liable for repayment. All loans were for 20 weeks, and most were repaid weekly, though some were

monthly. To enforce punctuality in repayment, funds imposed heavy penalties on borrowers who were late in repaying, which added about 3% to the average interest rate. Funds also actively prosecuted borrowers who failed to repay. The Lurgan Loan Fund in Co. Armagh, for example, made 23,428 loans with fines imposed on 7119 over the period 1838 to 1848. It had 645 summons and 77 levy warrants issued, but over eleven years (including the period of the Famine) suffered bad debts of only £50.<sup>39</sup>

After the payment of their principal expenses, interest to depositors and salaries to clerks, and losses because of bad debts, most funds made profits most years. Table 2 shows the profit and loss statement of the average loan fund for selected years. Profits were either retained to increase capital or donated to local charities such as schools or infirmaries. Funds were intended to be non-sectarian and it was claimed that 'The Board... have done all that was possible to discountenance all grants ... that appear to be of a sectarian or exclusive character'.<sup>40</sup>

Loan funds combined elements of the formal and informal sectors which, as Besley suggests, is of increasing interest for current microcredit.<sup>41</sup> The fund system was formal in that it was government-certified and loosely regulated which was important in the higher level depositor-institution agency problem. Funds were, however, not so formal as banks since, as local organizations with little capital or expertise, they made use of local knowledge and connections to establish the creditworthiness of borrowers and assuage moral hazard. Further, being charities they had no residual claimant who obtained any profit and was responsible for any loss. Structurally, they shared some characteristics with the contemporary German cooperatives.<sup>42</sup>

Demand for loans was quite large as evidenced by the almost 500,000 loans in 1843. It is difficult to get a sense of what alternative sources of borrowing cost, but moneylenders and mealmongers generally charged much higher rates if indeed such credit was available at all. That

the poor faced a real paucity of sources of capital is made clear in an inspection report from Tyrrell's Pass (Co. Westmeath) Fund in 1841:

Parties who have not paid attention to the subject, have little idea of the amount these poor creatures will willingly pay, and the distance they will come for a small loan. 20 or 25 statute miles is thought little of, to procure the Loan of 20s. or 30s. [£1 or £1.5], without which seed potatoes or oats cannot be procured.<sup>43</sup>

## V

In 1843, new legislation to 'consolidate and amend' laws relating to loan funds was written at the recommendation of the Loan Fund Board. Its members 'did not contemplate any alteration in the rate of interest payable on loans', but when the Bill was brought before Parliament they were shocked to discover it had been amended to include a reduction in the interest rate that loan funds could offer from 6% to 5%, and a reduction in the maximum payable by borrowers from 13.6% to 8.8%. 'During the passage of the Bill through Parliament, the voice of almost everyone *practically* acquainted with the system in Ireland was raised against the reduction in discount. Warning after warning was uttered as to the inevitable effects of such a measure..'.<sup>44</sup> Board members in Ireland seem to have had little influence over the legislation's passage in Westminster. Since it reduced the operating margin from 7.6% to only 3.8%, the Bill had a strong negative effect on the funds' financial situation and, as Table 3 indicates, there was an abnormally large number of closures in 1843, and an abrupt decline in new fund starts in 1845. Since a fund is recorded if it operates at any point in a year, and there is a planning stage in establishing a new loan fund, the drop in 1845 could well be attributable to the change in the interest rate. Figure 2 shows the inflation-adjusted face value of loans per capita on the same chart as the differential between the maximum interest rate payable on loan fund deposits and the yield on British government consolidated bonds. The

large decrease in the interest rate differential in 1843 is of course attributable to the decrease in the funds' maximum interest rate payable. This corresponds with the decrease in loans at the beginning of the Famine, so it is not possible to identify what effect the interest rate change would have had in the absence of the Famine.

Parliamentary records and other extant evidence surrounding this legislation are unrevealing, and we can only speculate regarding the reasons for the rate decreases, which were obviously not recommended by the Board. Possibly the government was concerned that usurious interest rates were being charged to borrowers. Pawnbrokers, moneylenders and even banks, however, commonly charged much more than 9% for small loans, so it is not obvious why the loan funds should have been singled out for this limit on interest rates. We speculate that it was motivated by the unexpected success of the loan funds in competing against the banks in the market for small and mid-sized deposits. As noted in a Parliamentary Inquiry in 1855, 'there is a good deal of jealousy between the loan funds and the banks'.<sup>45</sup> Between the mid-1830s and 1843, the loan funds had increased their deposits from around 2% of the joint-stock banks' total to around 5%. As Figure 1 shows, the loan funds had experienced very strong growth compared to the banks over this period. As the funds were paying 6% on deposits, compared to the 0% to 2% paid by banks, they must have seemed a formidable competitor, especially given their rapid rate of growth. Bank directors and shareholders may have exerted influence on legislators in London to reduce the loan funds' competitiveness.

## VI

Since the infestation of the potato crop which led to the Great Famine began in 1845, the 1843 legislation could hardly have been enacted at a worse time for the funds. Over the following few years, excess mortality and emigration totalled about 25% of the population. The Famine

most directly affected the class of individuals who borrowed from the loan funds, leading to considerable overdues and bad debts. Account books from the Newport Fund in Co. Mayo, which was under the aegis of the Reproductive Loan Fund Institution, show the extremely difficult circumstances faced by the loan funds during this period: in October 1845, it recorded 6 overdues out of 484 current loans, but by October 1847, there were 205 overdues out of 241 loans. It continued to lend to some borrowers despite the Famine, but by January 1849, it and all other funds under the Reproductive Institution had ceased lending. In a final tally the Newport fund, which seems not to have accepted deposits, found that it had lost £276 out of its capital of £1000.<sup>46</sup> This is a remarkably strong performance given that during the Famine over 80% of households in the region, essentially *all* of the borrowers, were on government food rations. Many funds managed well despite the extremely adverse conditions. For example, the Killaloe Fund in Co. Clare boasted that in 1848, it 'had not a single demand made on us for the withdrawal of money...; on the contrary, parties having drawn their money from our Savings' Joint Stock Banks, were anxious to lodge it with us on security of the Society's debentures'.<sup>47</sup>

Funds operating under the Loan Fund Board generally fared better than those under the Reproductive Institution, but fund records show over £10,000 of losses to depositors during the Famine<sup>48</sup>; to this must be added the reduction in capital at almost every fund in Ireland to arrive at the tally of bad debts. The Board's records showed that losses between 1843 and 1851 totaled £22,852, or 56% of the funds' capital as of 1843.<sup>49</sup> As Figure 2 shows, a large number of funds closed by 1853, but the remaining funds were healthy and making more loans than before. In effect, smaller and weaker funds preferentially closed during the Famine, while the stronger funds stayed open.

Table 2 summarizes average fund activity over time. Average net profits were negative in

1848, but were actually higher in 1853 than 1843 though they declined starting in the early 1860s. Donations declined permanently as a result of the 1843 legislation, and they took a long time to recover following the Famine as funds built up reserves to protect depositors. Relatedly, the number of funds fell at about the time of the 1843 legislation and Famine, then stabilized until the early 1860s, at which time they again started to very gradually decline as bank branches, especially those of the Post Office Savings Bank, began to proliferate. Wages grew across the period and absorbed an increasing fraction of profits, a trend that suggests decreasing involvement by volunteers.

## VII

In the early 1850s, the Board obtained a new Secretary who found many egregious problems with the operations of the loan funds: frauds by clerks, negligent inspections and legislation inadequate to allow sufficient control by the Board. These complaints led to the formation of an 1855 commission whose chief recommendation was that, to enable higher quality management, fund managers should be appointed by the Board and paid. Guinnane observes that the credit co-operatives in Ireland at the end of the century had similar problems in obtaining adequate management.<sup>50</sup> The government failed to act on this and other recommendations over the following 30 years, serving to discourage the more active Board members.<sup>51</sup>

The loan fund system suffered a gradual decline, and by 1880 only 78 funds reported to the Board; although new funds continued to be formed over this period, they were outnumbered by those which closed, as shown in Table 3. Pinpointing the sources of this decline is problematic, but a complete explanation would include increasing competition from banks, the ongoing effects of the 1843 interest rate reduction, and a decline in the loan funds' natural lending market. Reports to Parliament in later years blamed the decline on the substantial growth of the banking

system and the practice of banks issuing small loans to farmers and dealers, 'who could only heretofore get loans of such small amounts from Loan Funds'.<sup>52</sup> While the practice of banks issuing loans to smallholders was still uncommon in 1855, the Secretary of the Board reported that 'it is worthy of consideration that the system is getting into use, and rather interferes with the loan funds'.<sup>53</sup> Perhaps more important was the increased competition they offered for deposits. The branch banking system expanded considerably after the Famine, as shown in Figure 1, so that deposits in banks became increasingly convenient. Banks could also point to the fact that none of their depositors had lost anything during the Famine, in contrast to the undiversified loan funds. Further competition came from the Post Office Savings Bank, which was formed in 1861 to take deposits and offered a branch at every post office.

Second, with the margins reduced as a result of the 1843 borrowing and lending rate reductions, efficiency of operations became crucial. Many less profitable funds slowly exhausted their capital base and closed, and the expected level of profitability required to open a new fund increased. Finally, the Board recognized that the decrease in loan fund activities 'may be attributed, to some extent, to alteration for the better in the circumstances of that portion of the industrious agricultural poor of Ireland'.<sup>54</sup> Many of the loan funds' natural borrowers had either died, emigrated, or graduated to a higher class of borrowing. Indeed, borrowers who wished to obtain a loan larger than £10 were obliged to look beyond the loan funds. The loan funds themselves may well have contributed to this decline; borrowers from loan funds developed credit records and experience which were valuable in obtaining credit from banks. This natural flow of successful borrowers out of the loan fund system might not have been matched by an equal flow of new small-time entrepreneurs given the shrinking, but richer, population. These demographic shifts were accompanied by increased urbanization. Since the loan funds relied on personal

knowledge of borrowers and securities, they were not suited to thrive in cities. Thus, over the second half of the century, the market in which they had a comparative advantage over the banks shrank considerably. Together these factors point to the loan fund system being a transition institution with a structure that dominated the banks in the market for lending to the rural poor. As the economy developed, and information and screening problems became less severe, the funds' informational advantages became less important, but they still suffered from a lack of asset diversification.

### VIII

A resurgence in fund activity began around 1880, and continued until 1896. Interest rates obtained at banks and on government bonds fell very significantly over this period, which enhanced the attractiveness of the 5% interest paid on loan fund deposits, since in effect the loan fund premium was increasing. As Figure 2 suggests, there was a strong correlation between this premium and the activity of the loan funds. At the same time, the Board seems to have been very lax in performing its regulatory duties and many funds began to be operated as profit-making moneylending ventures. One reason for this lax regulation may have been that the Board was dependent on loan funds for its income, and hence was perhaps loathe to act against funds which submitted their dues, even if they were poorly or even objectionably managed.

A large number of complaints against funds, especially in the North of Ireland, led to a thorough investigation by an 1896 inquiry. The commissioners sent out 45,000 cards to current borrowers to 'ascertain whether they had any grievances'. While the great majority of the cards were returned without complaint, some borrowers objected to the high rate of interest, some stated they had loans from several different funds and could not repay, and most strikingly, 'many had inherited the debt from parents or other relatives'. In some districts, between 60% and 90% of all

households were borrowing from loan funds. An implication of the indebted rural poor not obtaining alternative, and less costly, sources of credit in this low interest rate period is that they still faced severe liquidity constraints.

The inquiry noted that 'in the majority of Societies the management, so far from being under the control of representative local Committees has passed into the hands of men who are merely money lenders, and who have taken advantage of the Charitable Loan Fund Act to open private money offices. They have in fact ingrafted on the Charitable Loan Fund System many of the worst features of "Gombeenism", and relying on the facilities in regard to recovery of debts afforded by the Loan Fund Act of 1843, have issued loans with a recklessness that would soon have reduced a private money lender to insolvency'.<sup>55</sup> One family had installed its members as paid clerks in a number of funds and together their salaries were over £700. Other instances of fraud and mismanagement were unearthed by the commissioners, and while many funds were forced to close, they concluded that 'although ... out of the 104 existing Societies, there are perhaps not more than twelve or fourteen Societies worked fairly well in compliance with the Rules, we are satisfied that generally the good more than counterbalances the evil'.<sup>56</sup>

Central among the commissioners' recommendations was that renewals of loans should no longer be permitted. This was accepted and, in 1896, the Board made it difficult for loan funds to sue for the repayment of loans which had been renewed. However, the Board intended for there to be accompanying legislation, but this was not passed until 1900 and turned out to be written improperly; it took another six years for the legal situation of the loan funds to be resolved. During these ten years, the entire system suffered from considerable uncertainty, and, as Figure 2 shows, the amount lent shrank substantially.

## IX

A last review of the loan funds occurred in 1914 as part of a more general study of rural credit in Ireland.<sup>57</sup> Most of the 51 remaining loan funds were only in existence because of their inherited capital rather than their ability to attract deposits. The report stressed the lack of interest shown by the managers, local committee members and deposit-holders in the operations of the funds. It observed that the elimination of renewals was putting the loan funds at a considerable disadvantage, since banks, which offered similar loans, were willing and able to renew. It was found that the system of weekly loans had almost ceased, in favour of monthly, or even a single, repayment. If the loan funds were to be retained as an institution, the Report recommended the maximum loan size should be increased to £50, since 'small farmers don't think it worth their while to get a £10 loan'.

One remarkable finding of the Committee was the very low level of bad debts incurred by loan funds. For example, during the period 1903 to 1912, when the total amount lent was over £2 million, total bad debts at all funds was just £2733, or 0.13%, a remarkably low ratio given that borrowers were from the poorest classes of society. Over 80 years of operation, the Ballyjamesduff Fund claimed bad debts of only £313 on loans amounting to almost £1,000,000. Moyne's Fund lost only £17 in 75 years. This excellent lending record, however, was offset by the funds' large administrative expenses in this period: salaries, for example, sometimes consumed over 10% of assets annually. As Table 2 shows, this was part of a long term trend, starting from the 1850s, in which expenses and salaries had been creeping up. Finally, the committee proposed that the loan fund system be discontinued, and its capital transferred to Cooperative Credit Societies.

As so often in the funds' history, these recommendations were ignored by the government. The Board, owing to a lack of funding, was in due course swallowed up by the Department of

Agricultural and Technical Instruction, and annual records cease in 1915. A few funds, however, continued to lend. The Roscrea Fund, for example, made a profit of £69 in 1939. Many of its borrowers were women, but it was clearly hampered by the maximum loan size, still set at £10!<sup>58</sup> By 1946, there were 25 loan funds still operating. The Minister of Agriculture at the time noted that ‘any society which has an appreciable number of borrowers and is paying its way is, in my view, serving a useful purpose and should not for the present be dissolved’.<sup>59</sup> All the funds, however, closed in the following few years.

## X

We focus, finally, on some economic inferences which may be drawn from the institutional history of the Irish loan funds. First, the success of the loan funds in lasting for so long is due, in large measure, to the fact that in the years until 1840 or so, the many independent, unregulated funds were flexible and able to experiment with different forms. The period of change in the early nineteenth century was particularly important, since the modifications adopted at that time established their future position. Successful changes — such as deposit-taking — were copied and institutionalized, sometimes by legislation. For some innovations, such as the introduction of the Board, local experimentation was not possible. Many experiments, such as the Musical Society’s attempt to establish branches outside Dublin, failed. While it is clear that some changes had a major impact on the loan funds, it is also striking that many of the central principles of small-scale lending used by Dean Swift — small loans, weekly repayments, two cosignatories but no physical collateral, and the force of law to obtain repayment if necessary — remained at the heart of the loan fund system. That these principles endured for over 200 years suggests they are likely to be useful in a wide variety of circumstances. At the same time, however, some modifications to Swift’s original system were necessary for the loan funds to be transformed into a large scale

institution.

Second, the loan funds benefited from an important interaction between improved mechanisms and economies of scale. In his studies of trade, Douglass North observes that ‘innovations evolved from interplay between two fundamental economic forces: the economies of scale associated with a growing volume of trade, and the development of improved mechanisms to enforce contracts at lower costs. The causation ran both ways.’<sup>60</sup> The same observation applies to the growth of the loan fund system from 1750 - 1843. When the Reproductive Institution was founded with £55,000, it suddenly increased the scale of the system, prompting new legislation which improved enforcement (especially through the Stamp Tax exemption). This in turn generated new growth in the system, on both the borrowing and lending sides. Increasing the scale of the system made it financially feasible to have a system of regulation, which then assisted in the protection of depositors, again leading to further growth. These interactions between scale and legislation led to a shift from personal to impersonal transactions, and from self-enforcement to third-party enforcement in a way that characterizes more modern economies.<sup>61</sup>

Third, an important condition for obtaining favourable legislative changes was that the loan funds were beneficial to the ruling elite; when they began to threaten that elite, legislators seem to have become apathetic or even hostile. An undercurrent of all the legislation *supporting* the loan funds was their contribution to reducing the public burden of poverty relief. For example, the 1778 Act notes that artisans who had insufficient capital had become ‘a burthen to the publick’. The Board’s establishment was at least partly motivated by the poverty relief aspect of the funds; in providing loans and giving a portion of their profits to local charitable purposes, they absorbed some of the cost of poverty relief. And until the 1840s, the loan funds were essentially complementary to the banks. By contrast, the 1843 legislation reducing the interest rates funds

could charge and offer was relatively *hostile*. We attribute this to the loan funds increasingly being perceived as competitors by the politically powerful banking system. In the succeeding years, as the banking system developed, the loan funds were unable to obtain parliamentary support for any kind of legal reform despite frequent appeals by the Board in part since they no longer offered much prospect of reducing taxation for the wealthy and powerful. That these were Irish funds struggling for attention before the Parliament of the entire United Kingdom also reduced their chances of obtaining legislative attention since the transaction cost was large relative to the benefit.

Fourth, the story of the loan funds provides support for Lin and Nugent's argument that 'institutions matter'. Economic development consists of creating institutions that enable growth. Since they succeeded in reducing the transactions costs of intermediation by making use of local information, the loan funds were such an organization. Neither banks (which were not active in the market for small loans) nor moneylenders (which could not attract large amounts of deposits) could perform the same function as efficiently in a poor rural environment. Barrow's criticism of the funds as being 'inadequate' to solve massive rural poverty, while obviously true in the sense that they did not transform the poor into a wealthy middle class, is off the mark. Their primary goal was to provide capital to the rural poor, which they did on a very large scale, in a self-sustaining fashion, over many years.

That the funds eventually became insignificant compared to the banks was perhaps inevitable regardless of government legislation. In a model of competing institutions, their comparative advantage was in using local information to make good lending decisions in the absence of formal credit records or physical collateral. As the Irish economy grew wealthier and more urbanized, the loan funds had little advantage on the lending side over the banks, and were

obliged to pay more for deposits because they held an undiversified portfolio. The decline of the loan funds does not imply that they were inherently less efficient than banks, but that the market in which they dominated was transitory, and they were unable to adapt (or to obtain legislative support to help them adapt). Indeed, they may have hastened the development of the banks by creating information — first, information about the risk associated with lending to the poor, and second information about the credit risk of individuals. Following the distinction between risk and uncertainty first suggested by Frank Knight, it seems plausible that the funds functioned as a *transition* institution in the move from uncertainty (where the probability distribution over outcomes is not known) to risk (where the distribution is known) in lending to the poor.<sup>62</sup> While both concepts are extreme, and in a nonstationary environment the distribution of probabilities over outcomes can never be completely known, there is a sense in which history allows risk to be quantified.<sup>63</sup> Relatedly, by introducing and regularizing financial intermediation among the poor, the loan funds prepared them for banking. The loan funds thus performed vital roles in the development of the Irish economy: they served as efficient financial intermediaries and helped create an environment suitable for the growth of the banking system.

### **Footnote References**

Banerjee, A., Besley, T. and Guinnane, T., 'Thy neighbor's keeper: the design of a credit cooperative with theory and a test', *Qu. J. Econ.* CIX(2), (1994) pp. 491-515.

Barrow, G., *The emergence of the Irish banking system 1820-1845* (Dublin, 1975) .

Besley, T., 'Savings, credit and insurance', in J. Behrman and T. Srinivasan eds., *Handbook of development economics*, Vol. IIIA, (Amsterdam, 1995), pp. 2123-2208.

Black, R., *Economic thought and the Irish question* (Cambridge, 1960).

- Cullen, L., *An economic history of Ireland since 1660* (London, 1972).
- Guinnane, T., 'A failed institutional transplant: Raffeisen credit cooperatives in Ireland, 1894-1914', *Exp. Econ. Hist.*, 31 (1994), pp. 38-61.
- Hoff, K., Braverman, A., and Stiglitz, J., eds., *The economics of rural organization: theory, practice and policy* (Oxford, 1993).
- Hollis, A., and Sweetman, L., 'Microcredit in pre-famine Ireland', (mimeo, 1997).
- Knight, F., *Risk, uncertainty and profit* (Boston, 1921).
- Lin, J. and Nugent, R., 'Institutions and economic development', in J. Behrman and T. Srinivasan eds., *Handbook of development economics*, Vol. IIIA, (Amsterdam, 1995), pp. 2301-2370.
- Mason, W., *A statistical account or parochial survey of Ireland*, 2 vols. (Dublin, 1814).
- Martineau, H., 'Cousin Marshall', *Illustrations of Political Economy*, No. 8 (London, 1832).
- Mokyr, J., *Why Ireland starved* (1<sup>st</sup> edn., 1983).
- Mokyr, J., *Why Ireland starved* (2<sup>nd</sup> edn., 1985).
- Munn, C., 'The coming of joint-stock banking in Scotland and Ireland, c. 1820-1845' in T. Devine and D. Dixon, eds., *Ireland and Scotland 1600-1850: parallels and contrasts in economic development*, (Edinburgh, 1983) pp. 204-218.
- Nicholls, G., *A history of the Irish poor law* (1856).
- North, D., *Institutions, institutional change and economic performance* (Cambridge, 1990).
- North, D., 'Government and the cost of exchange in history', *J. Econ. Hist.*, 44 (1984), pp. 255-64.
- North, D., 'Institutions', *J. Econ. Perspectives* 5(1) (1991), pp. 97-112.
- Ó Gráda, C., *Ireland, a new economic history, 1780-1939* (Oxford, 1994).
- Piesse, C., *Sketch of the loan fund system in Ireland* (Dublin, 1841)
- Sheridan, T., *The Life of the Rev. Dr. Jonathan Swift* (2nd edn., 1787).

Stewart, J., *Almanack* (Dublin, 1801).

Thom, A., *Thom's Almanack and Directory* (Dublin, 1844).

Ryan, P., *Provision for the poor in Ireland* (Dublin, 1838).

Wahid, A. ed., *The Grameen Bank* (Boulder, 1993).

### **Official Publications**

Annual Report of the Commissioners of the Loan Fund Board of Ireland, (P.P. various years, 1838-1914).

First Report of the Directors of the Irish Reproductive Loan Fund Institution, (P.P. 1844. XLIII).

Report from the Select Committee on Loan Fund Societies, (P.P. 1854-5, VII).

Report of the Committee Appointed to inquire into the Proceedings of Charitable Loan Societies in Ireland, (P.P. 1897, XXIII).

Report of the Departmental Committee on Agricultural Credit in Ireland (P.P. 1914, XIII).

Table 1 - Occupation of Borrowers from Mayo  
Loan Fund From Commencement

Occupation	Number	Average Loan (£)	Total Amount (£)
Small farmers	1472	2.74	4035
Weavers, spinners	649	2.18	1416
Dealers in sundries	153	2.24	342
Pig and corn jobbers	110	2.62	288
Shoe makers	105	1.74	183
Carpenters and coopers	82	2.12	174
Labourers	68	1.22	83
Butchers and fish carriers	54	1.65	89
Smiths	40	2.50	100
Tailors and hatters	27	1.63	44
Carmen	22	2.00	44
Sawyers and turners	16	2.06	33
Slaters and masons	16	1.88	30
Nailors, braziers, etc	15	1.27	19
Various	20	0.75	15
TOTAL	2849	2.41	6886

Source: "Provision for the Poor in Ireland" Ryan, p. 54. While Ryan work was published in 1838, it is unclear exactly what years are covered by this table.

Table 2 - Average Fund Profit Statements (£) - Various Years

	1843	1848	1853	1863	1873	1882	1891	1904	1916
Interest recv'd	145	95	183	145	136	110	131	86	91
Fines	44	28	34	45	46	48	58	38	19
Interest paid	(73)	(56)	(78)	(66)	(51)	(44)	(60)	(58)	(23)
Gross Profit	116	67	139	124	131	114	129	66	87
Wages	(45)	(54)	(65)	(82)	(86)	(91)	(90)	(69)	(69)
Other Expenses	(20)	(33)	(17)	(33)	(23)	(22)	(26)	(19)	(18)
Net Profits	51	(20)	57	9	22	1	13	(22)	0
Donations 37	6	9	22	19	9	10	4	na	
Number of funds	299	175	114	104	80	80	100	57	50

Source: Annual Reports, various years. "Other expenses" includes bad debts. Donations were made out of profits. A large number of funds were in the hands of a receiver in 1904. A small source of income not listed separately in this table was fees for application papers. Following 1882 Annual Reports were not presented before Parliament and only occasional years are available in the National Archives.

Table 3 - Loan Fund Commencement and Closings by Year

Year	Number Funds	Start	Cease	Ordered Closed	Year	Number Funds	Start	Cease	Ordered Closed
1838	50	-	-	-	1861	105	0	1	1
1839	224	-	-	-	1862	105	1	3	0
1840	215	-	-	-	1863	104	2	6	0
1841	274	52	12	0	1864	98	0	3	0
1842	300	38	34	9 (8)	1865	97	2	3	0
1843	300	34	66	0	1866	94	0	1	0
1844	266	32	11	3	1867	93	0	2	0
1845	263	8	16	2	1868	91	0	3	0
1846	256	9	11	2	1869	88	0	1	2
1847	247	2	29	2	1870	88	1	8	0
1848	221	3	51	7	1871	81	1	3	0
1849	172	2	33	9 (7)	1872	78	0	3	0
1850	145	6	2	11 (4)	1873	77	2	0	0
1851	123	3	4	1	1874	79	2	0	0
1852	122	3	10	6	1875	79	0	1	0
1853	115	3	2	1	1876	80	2	1	0
1854	116	3	0	0	1877	80	1	3	0
1855	116	0	5	1	1878	78	1	0	0
1856	115	4	9	1	1879	78	0	0	0
1857	111	5	3	0	1880	78	0	3	0
1858	111	3	1	0					
1859	112	2	4	0					
1860	110	2	5	0					

Source: Annual reports, various years. Counts of the funds that cease operations include funds that are "closed by order of the Loan Fund Board on account of irregularities in the management." Funds can take up to two years to stop operating after such an order. Some continue to operate; the number that actually close following the Board's order is shown in parentheses when this differs from the number of orders issued. Annual reporting to Parliament ceased in 1881 and fund dynamics could not be constructed beyond that year.





## Notes

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1. Mokyr, Black, Barrow, Munn, Guinnane and others have argued that undercapitalization and liquidity were serious economic problems in Ireland in the eighteenth and nineteenth centuries. Ó Gráda provides a more positive view of the post-Famine period for larger enterprises in *Ireland, a new economic history*, cap. 14-1.
  2. Mokyr, *Why Ireland starved*, p. 186.
  3. Barrow, *Irish banking*, p. 118.
  4. Black, *Economic thought*, p. 154.
  5. A close examination of the system during its pre-Famine peak, along with an analysis of its intermediation technology, which allowed the system to use local information that the larger national banks could not, can be found in Hollis and Sweetman, 'Microcredit in pre-famine Ireland'.
  6. Sheridan, *Life of Swift*, p. 234
  7. *ibid.* p. 457.
  8. Wahid, *Grameen Bank*.
  9. Piesse, *Sketch*, p. 9.
  10. *Report from the S.C. on Loan Funds*, (P.P. 1854-5, VII), p. 2. See also *Report on Agricultural Credit*, (P.P. 1914, XIII), p. 81.
  11. National Library of Ireland (hereafter NLI), six volumes by R.R. Madden relating to the loan fund system in Ireland (hereafter Madden), MSS 4466-4471, Vol I, p. 43.
  12. 17th-18th George III, c. XII.
  13. Stewart, *Almanack*, p. 107, and *Thom's Almanack*, p. 399.
  14. *Report from the S.C. on Loan Funds*, (P.P. 1854-5, VII), p. 3.
  15. NLI, A scheme for establishing general charitable loans throughout Ireland, I6551 Dubl.
  16. NLI, Society for Improving the Condition of the Irish Peasantry — Charitable loan institutions, JP 879.
  17. Madden, Vol. I, p. 46.
  18. Mason, *Statistical account*, Vol.1, pp. 352, 368, Vol.2, p. 132.

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19. Ó Gráda, *Ireland*, p. 138.
  20. According to its charter, reproduced in *Report of Irish Reproductive Institution* (P.P. 1844, XLIII).
  21. 4 Geo.IV, c. 32.
  22. Martineau, *Illustrations*, p. 130.
  23. National Archives (hereafter NA), OP 1844/18.
  24. North, *Institutions*, pp. 79 and 87.
  25. Cullen, *Economic history*, cap. 5.
  26. Ó Gráda, *Ireland*, p. 141.
  27. NLI, Second annual report of the Letterkenny loan fund society, 1839, p. 2.
  28. *First Report of the Loan Fund Board* (P.P. 1839, XXIX), p. 2.
  29. Ó Gráda, *Ireland*, p. 98.
  30. Nicholls, *Poor law*, p. 142.
  31. 6&7 Wm. IV, c. 55, and 1&2 Vic., c. 78.
  32. Despite their *legal* freedom from liability, some fund managers seem to have reimbursed depositors, as at Edenderry, Co. Kings, as shown in *Thirty-second annual report of the Loan Fund Board*, (P.P. 1870, XVII), Appendix A, No. 3.
  33. *Report from the S.C. on Loan Funds*, (P.P. 1854-5, VII), p. 337.
  34. NA, Secretary's Report of Special Inquiry, 1865, CSORP 8807.
  35. Madden, Vol. 5, p. 11.
  36. NA, Privy Council Minute Books #10 (1840-1).
  37. Madden, Vol. 3, p. 26; *Report on Agricultural Credit*, (P.P. 1914, XIII), p. 99.
  38. Mokyr, *Why Ireland starved*, 2<sup>nd</sup> edn., pp. 10-11.
  39. NLI, Report of the Trustees of the Lurgan Loan Fund, IR 3306 D4.
  40. Madden, Vol 3, p. 43.
  41. Besley, 'Savings, credit and insurance', p. 2182.
  42. Banerjee, Besley and Guinnane, 'Thy neighbor's keeper'.

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43. *Fourth Report of the Loan Fund Board*, (P.P.1842, XXIV), p. 31.
  44. NLI, Letter to the Governor-General of Ireland from Thomas Hincks, P2100.
  45. *Report from the S.C. on Loan Funds*, (P.P. 1854-5, VII), p. 352.
  46. P.R.O., Mayo Inspection Analysis Book, T-91-183, Ledger 4036.
  47. *Eleventh Report of the Loan Fund Board*, (P.P. 1849, XXIII), p. 16.
  48. *Thirty-second annual report of the Loan Fund Board*, (P.P. 1870, XVII), Appendix A, No. 3.
  49. Madden, Volume 4, p. 6.
  50. Guinnane, 'A failed transplant'.
  51. The testimony of Sir John Kingsmill, a former Board member, before the Select committee 359 shows this: 'When I found the Government would not take any account of our suggestions, I thought it was time to give up.'*Report from the S.C. on Loan Funds*, (P.P. 1854-5, VII), p. 359.)
  52. *Thirty-second annual report of the Loan Fund Board*, (P.P. 1870, XVII).
  53. *Report from the S.C. on Loan Funds*, (P.P. 1854-5, VII), p. 338.
  54. *Thirty-second annual report of the Loan Fund Board*, (P.P. 1870, XVII).
  55. *Report of the Committee appointed to inquire into Loan Societies* (P.P. 1897, XXIII), p. 12.
  56. *ibid*, pp. 1-27.
  57. One caveat associated with this argument is that the measured risk is conditional on an institutional structure and extrapolation to other institutions may be difficult.
  58. NA, Roscrea Loans Issued, BR/Tipp/27/ 3; NA, Roscrea Loan Fund Society Correspondence, BR.TIPP.27/I/I.
  59. Parliamentary Debates (Ireland) 99, p. 22.
  60. North, 'Institutions', p. 107.
  61. North, *Institutions*, p. 35, and 'Government', p. 257.
  62. Knight, *Risk, uncertainty and profit*.
  63. One caveat associated with this argument is that the measured risk is conditional on an institutional structure and extrapolation to other institutions may be difficult.