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# Irish credit unions: Differential regulation based on business model complexity

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ABSTRACT

This study examines the business model complexity of Irish credit unions using a latent class approach to measure structural performance over the period 2002 to 2013. The latent class approach allows the endogenous identification of a multi-class framework for business models based on credit union specific characteristics. The analysis finds a three class system to be appropriate with the multi-class model dependent on three financial viability characteristics. This finding is consistent with the deliberations of the Irish Commission on Credit Unions (2012) which identified complexity and diversity in the business models of Irish credit unions and recommended that such complexity and diversity could not be accommodated within a one size fits all regulatory framework. The analysis also highlights that two of the classes are subject to diseconomies of scale. This may suggest credit unions would benefit from a reduction in scale or perhaps that there is an imbalance in the present change process. Finally, relative performance differences are identified for each class in terms of technical efficiency. This suggests that there is an opportunity for credit unions to improve their performance by using within-class best practice or alternatively by switching to another class.



## 1. Introduction

A Commission for Irish credit unions was established in 2011 to assess the legislative framework and the business practices of Irish credit unions. The Commission Report (2012) has led to the introduction of new legislation for credit unions and the establishment of a Credit Union Restructuring Board to facilitate amalgamations within the sector.[1] The Commission contended that complexity in the business models of Irish credit unions could not be accommodated within a one size fits all framework. The appropriate number of classes necessary to accommodate this business model complexity has been subject to much debate. The Commission advocated three classes. The Credit Union Regulator, Central Bank of Ireland, has proposed a two-class framework (Central Bank of Ireland, 2013). The Irish League of Credit Unions, the primary trade body for credit unions in Ireland, while advocating a differentiated approach to the regulation of credit unions of different scales and

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[1] The Credit Union and Co-operation with Overseas Regulators Act 2012 (2012 Act) was enacted in December 2012 and the Credit Union Restructuring Board was established in January 2013. The Irish Government has allocated €250 million to aid the amalgamation process. By July 2015, the Credit Union Restructuring Board had successfully completed 29 transfer of engagements (mergers) involving 67 credit unions (ReBo Communique, July 2015).

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complexity was undecided as to the number of classes and at what stage these classes should be introduced (Irish League of Credit Unions, 2014).

In this study we seek to shed light on this debate. A modelling technique is employed which uses credit union characteristics to provide insight into both the likelihood of a multi-class model and the optimal number of classes. We model the structural business model of a credit union as a production technology using an enhanced hyperbolic distance function. This distance function is estimated parametrically using a stochastic frontier approach (Aigner, Lovell, & Schmidt, 1977; Battese & Corra, 1977; Nahn & Vu, 2013). A latent class structure is introduced to the stochastic frontier to capture unobserved differences in a credit union's production technology that might otherwise be labelled as inefficiency. The latent class stochastic hyperbolic distance frontier model enables a multi-class model to be estimated, rather than determined ex-ante. The multi-class model and the membership of credit unions in each class are modelled in terms of the financial viability features of individual credit unions. The analysis is undertaken for credit unions over the period 2002 to 2013.

Credit unions are cooperative financial institutions. They are owned by their members and can only provide services to their members. Credit unions are not-for-profit financial institutions. Any surplus they generate is either reinvested in the credit union or returned to members in the form of dividends or interest rebates. The first credit union was formed in Ireland towards the end of the 1950s. Throughout the following three decades there were a large number of new formations. During the 1990s the level of new establishments reduced significantly and credit union numbers peaked at 435 in 1999. More recently there has been a small number of transfer of engagements and two credit union liquidations.[2] In June 2015 there were 376 Irish credit unions with 2.6 million members and €14.2 billion of assets (Central Bank of Ireland, 2015). Irish credit unions primarily lend in the short-term (less than five year) personal loan market. Extreme pressures placed on Irish households from the collapse of property prices, and subsequent financial austerity measures implemented by the Government, has led to a severe and sustained downturn in their primary market (Glass, McKillop, & Quinn, 2014). This in turn has revealed significant weakness in the Irish credit union business model with, for example, average loans to asset ratios falling from 52 percent in 2008 to 28 percent in 2015.

Our analysis provides for a rich set of findings. First, a three class system is found to be optimal for Irish credit unions. Second, this optimal multi-class model is found to be dependent on three financial viability characteristics. They are the loan book as a percentage of total assets, the ability to generate an operational surplus and the capital adequacy position. Third, there are found to be distinct differences across each of the classes in terms of structural performance but there are broad similarities vis à vis scale economies. Two of the three classes are subject to diseconomies of scale at the mean. This may suggest that credit unions would benefit from a reduction in scale or perhaps that credit unions are not being permitted by the regulatory environment to provide the range of products and services consistent with their investment in staff and infrastructure. Fourth, relative technical efficiency performance differences are identified for each class. This suggests that credit unions can improve their performance by using within-class best practice or alternatively by switching to another class. Finally, the analysis highlights that an investigation based on a common frontier, which fails to recognise heterogeneity across credit unions, can be expected to overestimate the level of technical efficiency within the sector.

In summary, this study is the first to endogenously identify the existence of a multi-class business model for a credit union movement and to highlight that three classes are optimal. Although the analysis is based on Irish credit unions the results have applicability to credit union movements elsewhere. Credit unions worldwide are homogeneous in form with many credit union movements facing similar challenges to those in Ireland.[3] A number of credit union movements are also currently exploring the appropriateness of tiered regulation for different classes of credit union based on either asset size or business model complexity, for example the UK and Canada.[4] The rest of the paper is organised as follows. Section 2 reviews the literature on what sets credit unions apart as a financial form and the literature on structural performance assessment of financial institutions. In Section 3 we set out the methodological approached adopted. Section 4 profiles the variables used and provides a preliminary overview of the data. Section 5 details our primary findings. Section 6 presents a concluding commentary.

## 2. Literature review

### 2.1. Irish credit unions

Credit unions are cooperative organisations. The International Cooperative Alliance (ICA) defines a cooperative as: "*an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise*" (ICA, 2015, p.2). This definition emphasises the voluntary and open nature of membership as well as the importance of democratic principles. Although membership to the credit union

[2] Newbridge Credit Union and Berehaven Credit Union were liquidated November 2013 and April 2014 respectively.

[3] Worldwide, there are 57,000 credit unions serving 217 million people in 105 countries (WOCCU, 2015).

[4] In the UK credit unions are categorised as either Version 1 or Version 2. Version 2 credit unions are provided with much greater product flexibility but face stiffer regulatory requirements. Only 4% of credit unions are Version 2 and given the limited take up of Version 2 status there is debate at present about the appropriateness of the two-tiered framework (Tischer, Packman, & Montgomerie, 2015). In Ontario Canada differentiated requirements are placed on credit unions depending on their asset size. A recent review carried out at the behest of the Minister of Finance argues that a more appropriate approach would be to tailor regulatory requirements to business complexity (Albanese, 2015).

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