Journal of Economics and Business 57 (2005) 339–359

Journal of Economics & Business

Insolvency and economic development: Regional variation and adjustment

Richard Fabling [a], Arthur Grimes [b,*]

[a] *Ministry of Economic Development, Wellington, New Zealand*
[b] *Motu Economic and Public Policy Research, & University of Waikato, PO Box 24390, Wellington, New Zealand*

Received 14 January 2004; received in revised form 5 November 2004; accepted 11 February 2005

Abstract

We examine the determinants of forced insolvency in New Zealand. The study incorporates three key features. First, we use regional as well as national data. Second, we analyse the role of property prices, which influence collateral values. Third, we explain the rate of total forced insolvency including personal bankruptcies and involuntary company liquidations. Insolvencies are explained by economic activity, financial variables and collateral values. The interactions between economic activity, leverage and property price (collateral) shocks indicate that region-specific shocks can compound into significant localised economic cycles.

JEL classification: G33; O18

Keywords: Insolvency; Bankruptcy; Liquidation

1. Introduction

The firm life cycle is one where firms are born; many die early; some survive. Of those that survive childhood, some live through to middle age; some successful firms survive with great longevity. Studies at the individual firm level explain factors determining the likelihood

* Corresponding author. Tel.: +64 4 939 4250; fax: +64 4 939 4251.
E-mail address: arthur.grimes@motu.org.nz (A. Grimes).

0148-6195/$ – see front matter
doi:10.1016/j.jeconbus.2005.02.005

of firms dying or progressing from one stage of the life cycle to the next (Bartelsman & Doms, 2000). Another set of studies examines the determinants of the failure rate at the aggregate level, explaining the proportion of firms that fail over time (Wadhwani, 1986; Platt & Platt, 1994; Vlieghe, 2001).

This study is in the latter mould, incorporating three key features. The first is that we use regional as well as national data to explain insolvencies. New Zealand insolvency statistics are disaggregated into six regions which have had a variety of economic experiences over the sample period (1988Q1–2003Q2). The start of the period coincides with the mid-point of New Zealand's major economic reforms including removal of agricultural subsidies, reduction of industry protection, labour market deregulation, privatisation, social welfare reform, fiscal consolidation and anti-inflationary monetary policies (Evans, Grimes, Wilkinson, & Teece, 1996). Regional experiences differed markedly through this reform period and in its aftermath. The major urban centres (Auckland, in particular) grew quickly while many peripheral areas either declined or grew only gradually. (Grimes, Kerr, & Aitken, 2003, documents the effects of these developments on regional property prices.) This diversity of experience assists in analysing the determinants of insolvency when the regional data is treated as a panel.

Second, we examine the importance of regional property price developments in determining regional insolvency rates. Personal housing is the dominant form of collateral used by small and medium sized enterprises (SMEs) in New Zealand when raising debt finance. Changes in the value of this collateral can influence borrower and lender behaviour and so impact on the rate of insolvency.

Third, we explain the total rate of forced insolvency in New Zealand including both personal bankruptcies[1] and involuntary company liquidations. We group the two together since many personal bankruptcies are related to small business failures, where the business loan is secured over personal assets (Ministry of Economic Development, 2001). This behaviour is especially relevant to New Zealand which has a large proportion of micro businesses: 86% of all enterprises employ five or fewer full-time equivalent employees (MED, 2003).

Our work is informed by a number of other studies, especially Vlieghe (2001) and Platt and Platt (1994). Vlieghe's theoretical approach, which we adapt, is laid out in Section 2. Platt and Platt employ a simple theoretical model but with the distinguishing feature that it is applied as a panel to the states of the USA. They find that they can combine states into four groups; the failure rate of each group is driven by similar variables but with different elasticities. Four variables determine the (log of the) corporate failure rate in their model: the percent change in state employment, percent change in profits earned by sole proprietorships, the (log of the) state real wage and percent change (over 2 years) in the state business formation rate. The two former variables relate to business activity and revenues, the third is a component of business costs and the fourth reflects the higher failure rate for business start-ups than for established businesses.

[1] We interpret personal bankruptcies as being "forced" although in some cases bankruptcy is "voluntary". We do so, since voluntary bankruptcies are most likely to be the result of an adverse financial situation which would otherwise lead to forced bankruptcy.