

Small Business Failure Rates and the New Zealand Retail Sector: Perceptions of Shopping Mall Managers

Chelsea Cox and Ed Vos*

*Correspondence to:

Ed Vos

Professor of Finance

Waikato Management School

University of Waikato

Private Bag 3105

Hamilton,

New Zealand

Email: evos@waikato.ac.nz

Abstract

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Introduction

According to the New Zealand Ministry of Economic Development (http://www.med.govt.nz/irdev/ind_dev/smes/2005/2005-03.html) New Zealand is 'predominately a country of small business'. They represent about half of the full-time employees in New Zealand and contributing 37% of total GDP. This makes it important to accurately capture small business statistics for policy reasons. As suggested by Bannock and Doran (1980), the worst gap in British statistics, and indeed in virtually all other countries, is in statistics on new enterprise formations (births) and discontinuances (deaths). The "death" or failure of a small business does not generally become public knowledge and this can result in ambiguity as to whether a small business has actually failed or not. As information is not made readily available, researchers generally use one of several proxy events of failure. Confusion has stemmed from the existence of more than one failure proxy in the literature. This has been exacerbated by confusion over how the estimated failure rates should be interpreted.

This study uses shopping centre data, and suggests that it may be possible to aggregate failure rates within identifiable small business sectors. It is suggested that, where statistically appropriate, a *sector-by-sector* understanding of failure rates would greatly enhance the perception of 'likelihood of failure' as a risk factor. The small business literature has shown us that across the small business sector, data are usually widely spread and the 'small business experience' across many measured dimensions varies greatly. It seems logical, therefore, to build our understanding of small business, including our understanding of failure rates, on a sector-by-sector basis, where statistically appropriate. Care must be taken not to generalize about the small business experience from one sector to the next.

This study adds value to the literature in two dimensions. First, this research provides an out-of-sample test of the small business failure rates reported in Watson and Everett (1999). This facilitates direct comparisons of the small business sector's failure rates in Australia and New Zealand. Second, this study attempts to quantify the difference between the failure rates of New Zealand managed and unmanaged shopping centres. It is essential to test whether the failure rates of small businesses operating in managed shopping centres are significantly different from the failure rates of small businesses not operating in managed shopping centres in New Zealand. If the

two were significantly different, then it could be deduced that the presence of tenant selection by shopping centre management contributes to the lower failure rate.

A further issue of interest that is addressed in this study is whether 'incubating' small businesses minimises risk of business failure. Government agencies, financial institutions and others groups with an interest in small business are increasingly interested in ways of minimising risk of business failure. 'Incubating' small enterprises is an option currently being considered where the small enterprises operate within a managed environment. In light of this, the final objective of this study is to compare the small business failure rates with the corresponding official statistics. This potentially sheds light on the difference, if any, between 'discontinuance' and 'failure' or 'higher exposures to risk' for the small business industry.

This study expands on our understanding of small business failure in shopping centres (Watson and Everett, 1999) into New Zealand by further comparing failure rates between the 'managed' and 'unmanaged' shopping centres. It is found that the difference between the failure rates of the 'managed' and 'unmanaged' shopping centres is statistically significant for one of the five definitions of small business failure. Also, we find that the New Zealand shopping centre failure rates are similar to those in Australia, that published government '(1-continuance)' (continuance rates are reported) rates are much higher than the experience of this study and, therefore, somewhat misleading, and that extending our understanding of failure rates to the shopping centre sector by use of managed shopping centre data seems appropriate. We argue that the difference between 'failure'-rates in this study and the '(1-continuance)'-rates requires further research since this group of companies seems to be 'morphing' within the SME sector.

Background

Obstacles to knowing true small business failure rates include the lack of reliable data, different yardsticks for what defines failure and differing definitions of what constitutes a small business. The first obstacle is the lack of reliable data available on small business enterprises (Bannock & Doran, 1980; Lindsay et al 2001; SEAAANZ, 2001). This problem is complicated further because once a small business has ceased operating, information concerning the business rests with the owner. Also, there is no systematic reporting procedure on small business failure like there is with larger

counterparts, especially listed companies. Furthermore, as Bannock and Doran (1980) have suggested information relating to the discontinuance of small businesses is particularly difficult to obtain. Due to this lack of reliable data on small business failures, reported failure rates are predominantly biased, if available at all.

The second obstacle encountered in disclosing accurate small business failure rates is how failure is defined. Watson and Everett (1999) found certain measures of failure to be biased. Bankruptcy and discontinuance of business are two extreme measures of failure in that industries with large capital commitments will experience high bankruptcy failure rates, but low discontinuance of business failure rates. Numerous studies have reported failure rates for which Watson and Everett classified the failure measure as biased. These studies include: Burderl *et al.* (1992); Churchill (1952); Ganguly (1985); Hutchinson, Hutchinson and Newcomer (1938); Phillips and Kirchoff (1989); Stewart and Gallagher (1986); Fredland and Morris (1976); and Lowe, McKenna and Tibbits (1991). The failure definition used will dramatically influence the failure rate captured. Hence this study employs the five definitions of small business failure proposed by Watson and Everett (1999). A further bias observed in previous research is that the failure definition employed depended on the nature of the data available (Watson and Everett, 1999).

The third significant problem experienced in accurately reporting small business failure rates is defining a small business. One congressional committee in the U.S.A. was presented with 700 such definitions (White, Bennett and Shipsey 1982). For the purposes of this paper, a small business is defined by Ang's (1991) popular agency-based definition which considers that small business poses most of the following characteristics: It has no publicly-traded securities; the owners have undiversified personal portfolios; limited liability is absent or ineffective; first-generation owners are entrepreneurial and prone to risk-taking; the management is not complete; the business experiences the high cost of market and institutional imperfections; relationships with stake holders are less formal; and it has a high degree of flexibility in designing compensation schemes. In brief, Ang's (1991) agency-based definition summarizes the overall organizational and financial complexities help characterize a typical small- to medium-sized enterprise. Thus, this definition also encapsulates the way the New Zealand Ministry of Economic Development defines a small business, which at least partly depends on the number of full-time equivalents.

The Failure Definitions Used

An evident problem with small business failure statistics, discussed earlier, is the absence of a failure definition that accurately captures small business failure rates. Since the calculation of failure rates is highly influenced by how failure is defined (Hanes, 1991), it is important that the failure measure is not biased. However, no single definition of failure is generally accepted as being the best to use in all circumstances (Bruno and Leidecker, 1998). Thus, a variety of definitions have been used in the past.

Watson and Everett (1993, 1996, 1999) have long analysed failure definitions and in their 1996 study they used five warranted failure definitions to capture small business failure rates. This paper will utilise those same measures. The other unwarranted failure definitions are discussed in detail in Watson and Everett (1996) and will therefore not be discussed here. The first definition of failure employed is the slightly wider definition of bankruptcy, being that of *bankruptcy or ceased operations at a loss to creditors* proposed by Dun and Bradford (1974). This deems a business to have failed when operations are ceased with a loss to creditors or legal bankruptcy declared. However, bankruptcy is an extreme measure of failure and would fail to represent small business failure rates alone. This measure examines only a cohort of failed firms and typically provides no information on the population of small businesses (Watson and Everett, 1999).

The second definition employed to capture failure rates is *to prevent further losses*, when only businesses ceasing or sold to prevent further losses are deemed to have failed. This definition suggested by Ulmer and Neilson (1947) also encompasses bankruptcy and ceased operations at a loss to creditors. However, this definition is perhaps the most difficult measure to obtain information on, because it requires knowledge concerning the owner-managers' financial situation.

The slightly broader measure of failure proposed by Cochran (1981) is *failure to "make a go of it"* where "failure should mean inability to 'make a go of it', whether losses entail one's own capital or someone else's, or indeed, any capital". This definition is classified as the middle of the road definition by Watson and Everett (1999) and incorporates the prior two measures. It appears to be the most relevant, yet it is subjective and a considerably broader measure of failure.

The fourth and broadest definition utilised is *discontinuance of ownership*. This measure considers every business that has closed or experienced a change in ownership to have failed, regardless of whether it continues to operate under the new owner or whether the sale or closure was due to reasons that would not necessarily entail failure, such as an owner retiring (Watson and Everett, 1996). This, being the broadest definition, encapsulates the previous three definitions and realises the highest failure rate.

The final and most ambiguous definition is *discontinuance of business* (Fredland and Morris, 1976), which unlike the others it is not a subset of the previous definitions. This measure only considers small businesses that have ceased to operate as failed (Reynolds, 1987). *Discontinuance of business* is the most common definition used in past studies and is the least homogeneous.

These five definitions above were those justified and utilised by Watson and Everett (1996, 1999) and will all be employed to capture the small business failure rates in this study because no one definition has a stand alone advantage.

Main Messages

To overcome the obstacle of limited reliable data available on small business enterprises, Watson and Everett (1996) captured failure rates of small businesses operating within “managed shopping centres” in Australia. In managed shopping centres, the tenancy agreement exists between the management of the shopping centre and the owner-manager of each small business operating within the centre. Due to its contractual obligations, a small business must first meet the criteria set by management before an agreement is signed. Subsequently the business is accountable to the centre’s management, being subject to performance evaluations and monitoring. When needed, the management may be called on to offer advice and guidance. Managed shopping centres have access to information concerning all current, and past small businesses from tenancy agreements. Tenancy agreements entail the precise date of start-ups and failures can be identified. Also, all business start-ups and failures are captured irrespective of their duration. Furthermore, the manager of the centre is more likely to provide the reason of failure in an unbiased manner than a failed small business owner who tends to offer a more subjective reason for failure.

Watson and Everett (1996) collected failure rates from 5,196 small businesses within 51 managed shopping centres across Australia and reported significantly low failure rates. Watson and Everett suggested “lower failure rates can be credibly explained by the suggestion that it is the process of tenant selection (and the constant monitoring of tenants with advice being offered where necessary) which is at least partially responsible for the reduced failure rates in managed shopping centres”.

In light of the above, this study adds value to the literature in two dimensions. First, this research provides an out-of-sample test of the small business failure rates reported in Watson and Everett (1999). This facilitates direct comparisons of the small business sector’s failure rates in Australia and New Zealand. Second, this study attempts to quantify the difference between the failure rates of New Zealand managed and unmanaged shopping centres. It is essential to test whether the failure rates of small businesses operating in managed shopping centres are significantly different from the failure rates of small businesses not operating in managed shopping centres in New Zealand. If the two were significantly different, then it could be deduced that the presence of tenant selection by shopping centre management contributes to the lower failure rate.

A further issue of interest that is addressed in this study is whether ‘incubating’ small businesses minimises risk of business failure. Government agencies, financial institutions and others groups with an interest in small business are increasingly interested in ways of minimising risk of business failure. ‘Incubating’ small enterprises is an option currently being considered where the small enterprises operate within a managed environment. In light of this, the final objective of this study is to compare the small business failure rates with the corresponding official statistics. This potentially sheds light on the difference, if any, between ‘discontinuance’ and ‘failure’ or ‘higher exposures to risk’ for the small business industry.

Data

More than 95% of all enterprises in capitalist countries are typically small businesses, regardless of how a small enterprise is defined (McMahon *et al.*, 2000, p.41). Additionally, in New Zealand the contribution that is made by the small business sector is relatively significant to the overall economic situation (Lindsay *et al.*, 2001). According to the Ministry of Economic Development in

New Zealand, 97% of businesses are small, with these small businesses accounting for 37% of the New Zealand economy and employing 45% of New Zealand's full-time workers. With small businesses making up 37% of the New Zealand GDP, it is important that the extent of New Zealand small business failure is measured accurately.

To obtain accurate and reliable data, this study uses data provided by shopping centres in New Zealand since shopping centres keep records of past and present small business tenants and from the tenancy agreements accurate information is provided on small business start-ups and failures within the shopping centres. Furthermore, the owner or managers of the shopping centres are more likely to report the reason for failure in an unbiased manner with consistent judgment. However, it must be noted that the cause of failure report by the manager or owner may vary from that of the small business owner.

The centre's owner or manager were asked to provide the following information: (i) The name of each businesses; (ii) the type of small business; (iii) the date the business commenced; (iv) the date sold/ceased if applicable; (v) where applicable, the primary reason for the closure or change in ownership, being bankruptcy, avoidance of further loses, failure to "make a go of it", retirement or ill health, realisation of a profit, unknown, or other; and (vi) any clarifying or additional comments. Each survey (see Appendix A) was undertaken in an interview environment between the manager or owner and the interviewer (the authors).

The data was obtained from four independent shopping centres in three different cities in New Zealand. The period studied is 1994 to 2002. Only small businesses in shopping centres that took the form of Ang's (1991) small business were included in the data. Furthermore, the small businesses ranged from retail, service, and food businesses. The first centre (Mall A) opened in 1994. The small businesses that commenced in Mall A in 1994 were considered new ventures. These combined with other new ventures through to 2002 made up 66 new ventures from Mall A. The second shopping centre (Mall B) underwent reconstruction in 1994 and all leases were up for evaluation. All the new and continuing leases from 1994 were considered new start-ups, totalling 74 start-ups from 1994 to 2002. The third centre (Mall C) also had to renew all leases at the end of 1993 and therefore the small businesses continuing were considered new start-ups, making a total of 42 start-ups including new ones throughout the time period. The final centre (Mall D) underwent structural changes, which resulted in the sale of each premise in which the small

businesses within the shopping centres operated. Due to this significant change in Mall D, all continuing small businesses operating in 1994 were considered start-ups, totalling 38 start-ups from 1994 to 2002. The final data set consisted of 220 small business start-ups.

There is a unique aspect about the centres used in this study. Mall A and Mall B are “management-dependent” shopping centres in the sense that the small businesses operating within these centres are accountable to the centre’s management team. That is, given the leasing agreements formed with each business manager, shop owners were answerable to management. More specifically, each small business has to report their performance to management on a monthly basis. In contrast, Mall C and Mall D are “management independent”. Mall C was an open-plan centre and the premises were leased from a landlord who had no other relations with the small businesses operating within the open plan centre. In 1994, Mall D, under the Unit Titles Act 1972, sold each shop premise to individuals who consequently had no requirements to report to management. Therefore, the small business within Mall C and Mall D take the characteristics of New Zealand small businesses not operating in managed centres, hence not subject to control or monitoring from management.

A key reason for this study is to see if failure rates of small businesses operating in managed shopping centres are significantly different to failure rates of small businesses not operating in managed shopping centres. To facilitate this objective, malls A and B are combined to form the management dependent small businesses and malls C and D are combined to form the management independent small businesses. Tests were carried out to test whether the failure rates captured in the managed centres were significantly different to those captured in the unmanaged centres. From the significance tests, a view can be reached as to whether the managed and unmanaged shopping centres are subject to similar levels of monitoring. If the failures rates were statistically different, it could be argued that operating independence has its costs in terms of lower survival likelihood. Furthermore, direct comparisons could be made between the two sets of small business failure rates and the corresponding official statistics. If the actual small business failure rates are significantly lower than the official counterparts, this procedure posits a challenge to the conventional view that small businesses are ‘riskier’ due to their lower survival likelihood.

Methodology and Results

Data compiled from the surveys of the four malls is summarised in Table 1 by reason for sale or closure. The final data set contained 220 small business start-ups of which 50 percent (111) were sold or liquidated over the period 1994 to 2002. If reasons for sale or closure were unknown to the shopping centre manager (manager in the case of mall A and mall B) or centre owner (in the case of mall C and D) they were included in the category 'did not make a go of it'. The manager or owner felt this was the most likely explanation that captured the sale or closure of those small businesses. "Other – not failed" were those businesses that were considered not to have failed and "Other – failed" were those businesses that were deemed to have failed. The other reasons for sale or closure are self-explanatory. The reasons for sale or closure of each firm (Table 1) were then grouped under the five definitions of failure discussed earlier: Bankruptcy, to prevent further losses, failed to "make a go of it", discontinuance of ownership or discontinuance of business, as shown in Table 2.

TABLE 1: Reasons for Sale or Closure

Reason for Sale or Closure	NUMBER					PERCENT				
	Mall A	Mall B	Mall C	Mall D	Total Combined	Mall A	Mall B	Mall C	Mall D	Total Combined
Bankruptcy	1	3	0	2	6	1.5	4.1	0	5.3	2.7
To prevent further losses	17	7	7	13	44	25.8	9.5	16.7	34.2	20.0
Did not "make a go of it"	11	1	3	12	27	16.7	1.4	7.1	31.6	12.3
Retirement or ill health	0	1	0	0	1	0	1.4	0	0	0.5
To realise a profit	2	1	0	1	4	3	1.4	0	2.6	1.8
Other - not failed	8	5	12	1	26	12.1	6.8	28.6	2.6	11.8
Other – failed	0	0	3	0	3	0	0	7.1	0	1.4
Total sales or closures	39	18	25	29	111	59.1	24.3	59.5	76.3	50.5
Continuing businesses	27	56	17	9	109	40.9	75.7	40.5	23.7	49.5
Total start-ups	66	74	42	38	220	100	100	100	100	100.0

Table 2 demonstrates that the definition of failure used affects the reported failure rates. The broader the definition, the higher the likely failure rate; and the narrower the definition, the lower the likely failure rate. As discussed earlier, the first four definitions of failure are subsets of each other. However, this does not apply to the last definition, discontinuance of business, because it

captures 43 per cent of total sales and closures, whereas discontinuance of ownership captures 100 per cent of sales and closures.

TABLE 2: Reasons for Sale or Closure Grouped by Failure Definition

Reason for Sale or Closure	Bankruptcy or loss to creditors	To prevent further losses	Failed to "make a go of it"	Discontinuance of ownership	Discontinuance of business
Bankruptcy	6	6	6	6	6
To prevent further losses		44	44	44	26
Did not "make a go of it"			27	27	5
Retirement or ill health				1	0
To realise a profit				4	0
Other - not failed				26	10
Other – failed			3	3	1
Totals	6	50	80	111	48
% of total sales and closures	5%	45%	72%	100%	43%

Table 3 presents the average annual failure rates over the period 1994 to 2002 for all malls, using the various definitions of failure presented in Table 2. The failure rate each year for a given definition is calculated as follows:

$$p = x / n$$

where p ≡ sample proportion of failed businesses;

x ≡ number of businesses failing in a given period;

n ≡ number of businesses in the sample, i.e. the sum of the number of continuing businesses, businesses sold or ceased for reasons other than that specified by the given definition, and the businesses that failed during the period.

In Table 3, just like more businesses are considered to have failed when broader definitions of failure are used, there are also more business start-ups. This is because of the treatment of data relating to businesses sold during the sample period. For instance, when a business is sold for any reason and the new owner continues its operations, this change in ownership is considered to be a new start-up under the "discontinuance of ownership" definition of failure. However, it would not be considered a new start-up if failure was defined as "failed to make a go of it" unless the

discontinuance of ownership was due to the seller not meeting any of their objectives. Furthermore, this same sale could only be considered a new start-up under the "*disposed of to prevent further losses*" definition if the failure to "make a go of it" was due to financial reasons. Moreover, the change in ownership can only be considered a new start-up under the "*bankruptcy*" definition of failure if the sale was not only to prevent further losses, but more specifically due to bankruptcy. On the other hand, if discontinuance of business is used to define failure, none of the sales would be considered as indicative of a new business start-up. Hence, there is a considerable difference in both the number of business failures and of business start-ups between the definitions.

The failure rates reported in Table 3 vary considerably from one definition of failure to the next. Defining failure as the "*discontinuance of business*", the average failure rate was reported as 4.2 percent. As predicted, the greatest failure rate was obtained using the most general "*discontinuance of ownership*" definition with an average failure rate of 9.6 percent per year. Narrowing the definition to those that had *failed to "make a go of it"* resulted in a decrease in the annual failure rate to an average of 7.0 percent. Considering only those business that had ceased or been sold "*to prevent further losses*" saw the rate drop further to 4.4 percent, with a mere 0.5 percent on average per annum for those that were sold or ceased due to "*bankruptcy*".

Before interpreting the failure rates and their significance for New Zealand, it is important to distinguish whether there is a difference in the reported failure rates within managed centres and unmanaged centres. If no significant difference is discernable, then the small businesses operating in managed centres can represent New Zealand small businesses not operating in managed centres. To carry out the significance test, management dependent small business failure rates are compared to management independent small business failures to examine Watson and Everett's conjecture that the process of tenant selection and the constant monitoring of tenants with advice being offered where necessary would result in managed shopping centres having lower failure rates. The question is whether less guidance and supervision would result in higher failure rates for the small businesses.

TABLE 3

Combined Sample: Average Annual Failure Rates by Definition for the period 1994-2002 (%)										
	1994	1995	1996	1997	1998	1999	2000	2001	2002	Totals
Bankruptcy/loss to creditors										
New Start-ups	121	6	13	9	11	6	8	10	5	189
Failed	0	0	0	0	0	2	1	2	1	6
Ceased - Not Failed	5	7	9	4	8	9	17	7	6	72
Continuing	116	115	119	122	125	120	110	111	109	1047
Percent Failed	0.0	0.0	0.0	0.0	0.0	1.5	0.8	1.7	0.9	0.5
Disposed of to prevent further losses										
New Start-ups	121	6	13	9	11	6	8	10	5	189
Failed	3	1	5	3	8	7	10	11	2	50
Ceased - Not Failed	2	5	4	3	1	5	11	3	6	40
Continuing	116	115	119	122	125	120	110	111	109	1047
Percent Failed	2.5	0.8	3.9	2.3	6.0	5.3	7.6	8.8	1.7	4.4
Failure to "make a go of it"										
New Start-ups	121	6	13	9	11	6	8	10	5	189
Failed	5	6	11	7	10	12	13	15	1	80
Ceased - Not Failed	0	0	2	1	0	1	11	1	4	20
Continuing	116	115	119	122	125	120	110	111	109	1047
Percent Failed	4.1	5.0	8.3	5.4	7.4	9.0	9.7	11.8	0.9	7.0
Discontinuance of ownership										
New Start-ups	121	6	13	9	11	6	8	10	5	189
Failed	5	7	11	8	12	15	24	21	8	111
Continuing	116	115	119	122	125	120	110	111	109	1047
Percent Failed	4.1	5.7	8.5	6.2	8.8	11.1	17.9	15.9	6.8	9.6
Discontinuance of business										
New Start-ups	121	6	13	9	11	6	8	10	5	189
Failed	5	2	8	4	6	5	8	8	2	48
Ceased - Not Failed	0	5	3	2	4	8	13	5	5	45
Continuing	116	115	119	122	125	120	110	111	109	1047
Percent Failed	4.1	1.6	6.2	3.1	4.4	3.8	6.1	6.5	1.7	4.2

In Table 4a, we report the observed and expected continuance-closure frequencies of the managed and unmanaged groups from the bottom three rows of Table 1: (A+B) versus (C+D) where $O(\cdot)$ and $E(\cdot)$ represent the respective observed and expected frequencies. $E(\cdot)_{ij}$ denotes the expected frequency in row i and column j and is computed as the product of the sum of the observed frequencies in row i and the sum of the observed frequencies in column j divided by the total sum down the diagonal. For instance, we compute the expected frequency of failure for the managed group, (A+B), as $(111 \cdot 140 / 220) = 70.64$. The remaining entries in the table are computed in the same fashion.

Table 4a: χ^2 Test Statistics for Managed and Unmanaged Shopping Centres

Category	O(A+B)	O(C+D)	Sum
Failure	57	54	111
Survival	83	26	109
Sum	140	80	220

Category	E(A+B)	E(C+D)	Sum
Failure	70.64	40.36	111
Survival	69.36	39.64	109
Sum	140	80	220

We then compute the χ^2 test statistic as follows:

$$\chi^2 = \sum_{i=1}^n \frac{(O_i - E_i)^2}{E_i}$$

The χ^2 test statistic is 14.61 with 1 degree of freedom (p-value less than 0.01). This suggests that there exists a statistically significant difference between the observed and expected frequencies. In order to see which definition is driving these results, we replicate the same test for comparing the survival-failure rates of the managed and unmanaged groups based on different definitions of small business failure. The results are summarized below.

Table 4b shows that there is a statistically significant difference between the survival rates of (A+B) and (C+D), although this inference only holds for the vague definition, “*Did not make a go of it*”. Based on these results, it could be deduced that the managed shopping centres outperform the unmanaged counterparts in terms of survival likelihood under one definition. In sum, small

businesses not operating in managed shopping centres enjoy independence and flexibility at a relatively small price of reduced survival likelihood.

Table 4b: χ^2 Test Statistics Based on Different Definitions of SME Failure

Reason for Sale or Closure	χ^2	p-value
Bankruptcy	0.02	0.88
To prevent further losses	1.96	0.16
Did not 'make a go of it'	4.90	0.03
Retirement or ill health	0.57	0.45
To realize a profit	0.23	0.63

Next, we compare the small business failure rates in Australia and New Zealand, using the data from Watson and Everett (1999) and this study. Table 5 summarizes the mean failure rates (from Table 3) of all four centres combined. Also determined are the 95 percent confidence intervals surrounding each of the failure definitions. Each confidence interval indicates that if one takes repeated random samples from the population for each of the sample means, 95 percent of these confidence intervals will contain the true unknown population mean.

TABLE 5: 95% Confidence Intervals around New Zealand Failure Rates

Reason for Sale or Closure	Mean	95 % Confidence Interval			W&E's Mean
Bankruptcy/loss to creditors	0.5	0.1	~	0.9	0.7
Disposed to prevent further losses	4.4	3.2	~	5.6	2.3
Failed to "make a go of it"	7.0	5.5	~	8.5	4.1
Discontinuance of ownership	9.6	7.9	~	11.3	9.4
Discontinuance of business	4.3	3.1	~	5.5	3.9

At least two inferences can be drawn from Table 5. First, three of the five of Watson and Everett's (1999) five average failure rates fall within the 95 percent confidence intervals of the New Zealand data. This suggests that the mean small business failure rates are substantially similar in Australia and New Zealand. Thus, this study provides an adequate *out-of-sample* test of the Watson-Everett

conjecture that the mean small business failure rates are reasonably low. Second, the mean failure rate under the definition, “*discontinuance of ownership*”, is 9.6 percent per annum. This is the highest failure rate observed because it not only includes the first three failure measures but also includes all businesses sold or ceasing to operate. Also, “*discontinuance of ownership*” captures all the reasons for sale or closure in both clusters of data making this similarity more salient. As will be covered below, these rates are far below the official statistics reported by the New Zealand Ministry of Economic Development (2001).

Comparison to New Zealand Official Rates

The New Zealand Ministry of Economic Development (2005) now reports on continuation rates. Continuation rates measure how long enterprises remain in the business demography dataset. These rates are calculated by matching the business reference numbers for entries in 2000 with those of subsequent years. Continuation rates from small enterprises for the period 2000-2004 in the retail sector indicate that of those that existed in 2000, the percentages that continued each subsequent year were 72.5%, 57.5%, 48.5% and 42.12%. This means that the ‘non-continuing’ group averaged an annual rate of 27.5%, 21.25%, 17.2%, and 14.47% per year. Comparing this to our small business start-ups in 1994, no definition demonstrated such high failure rates, with our highest failure rate reported under the widest failure definition; discontinuance of ownership at 4.1 percent per annum.

The reported failure rates in this study are significantly lower than the ‘non-continuation’ rates reported by the New Zealand Ministry of Economic Development. This is a vital comparison as the rates used by the Ministry of Economic Development influence future policy decisions made by the Government, financial institutions and other groups with an interest in small businesses. Further, the Ministry of Economic Development suggests that its statistics are generally perceived to under-report failure. What seems clear is that (1-continuation) rates is not easily reconciled with a closer understanding of failure rates.

Conclusion

The approach taken in this study resembles that taken by Watson and Everett (1996, 1999). Watson and Everett's study attempted to clarify the misconceptions concerning small business failure in that small business failure rates are overstated. The average failure rates reported by Watson and Everett were lower than those of previous studies. In addition, they suggested the process of tenant selection and the constant monitoring of tenants with advice being offered when necessary could credibly explain the lower failure rates.

The data presented here included shopping centres that were management dependent in which the small businesses operating within the centres were subject to tenant selection, monitoring and constant advice. In contrast, the other shopping centres in this study were management independent in that the small businesses operating within the centres were not exposed to monitoring and tenant selection and were not accountable to management. The failure rates captured within these centres were statistically different from one another. This indicates that Watson and Everett's results could be generalized to the New Zealand experience. However, we suggest that the difference between the failure rates of the managed and unmanaged shopping centres is only statistically significant under the vague definition of "*did not make a go of it*". On balance, we document relatively low small business failure rates in New Zealand and thus agree with Watson and Everett that, for shopping centres at least, failure rates are indeed lower than both common perception and government reported rates. Therefore, one can question the argument that 'incubating' small enterprises minimises risk of business failure. On a more positive note, the failure rates in this study captured from shopping centres in New Zealand were significantly lower than those '(1-continuation)'-rates of the Ministry of Economic Development. This could imply that the risk of small business failure is less than that has been previously perceived.

The problem of the availability of reliable data on small businesses, even more difficult in the case of failure rates, could now be addressed in the case of small businesses operating in shopping centres. We conclude that monitoring, control and tenant selection of small businesses operating in managed shopping centres could significantly reduce failure rates in New Zealand. Periodic performance evaluation suggests that small businesses that operate in managed shopping centres

are subject to external monitoring. It is found that this mechanism is related to lower likelihood of business failure.

Since policy and, to some extent, entrepreneurial activity is driven by its perceived riskiness, including the risk of failure, it is helpful to understand more detail in the reported failure rate statistics. This study suggests that small business failure rates could be modelled and reported on a sector by sector basis, which would provide a more accurate assessment of failure rates as well as a deeper understanding that 'discontinuance' is not necessarily 'failure' and not, therefore, to be confused with a risk measure.

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Appendix A: Data Collection Instrument

SMALL RETAIL BUSINESS SURVEY

For each small business operating within your managed shopping centre, PAST AND PRESENT, could you please complete the following:

1. Shop number: _____.
 2. Type of business (e.g. clothing retailer, music store, café): _____
_____.
 3. Date commenced: _____
 4. Date sold or ceased (if applicable): _____
 5. If this business has been sold or ceased, what was the PRIMARY REASON for the closure or change in ownership? *Select from the following:*
 - ⊙ Bankruptcy
 - ⊙ Avoidance of further losses
 - ⊙ Failure to “make a go of it” (i.e. did not satisfy some of the owners’ objectives)
 - ⊙ Retirement or ill health
 - ⊙ Realisation of a profit
 - ⊙ Unknown
 - ⊙ Other (please specify below)
 6. Any extra or clarifying comments: _____
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