

Financial Reporting and its impact on Growth and Performance of Indian Manufacturing SME's

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Abstract

This paper describes an exploratory study of the impact of financial reporting practices upon business growth and performance outcomes amongst small and medium-sized enterprises (SMEs) engaged in manufacturing in India. The study is able to establish some statistically significant bivariate associations between the extent and frequency of financial reporting undertaken and certain measures of SME growth and performance. Management is a complex activity affected by a myriad of interacting internal and external factors, and must inevitably be undertaken in a holistic manner in SMEs. Particular practices make a contribution to the whole task without necessarily standing out as all-embracing solutions to problems generally encountered. Thus, it is argued that improved financial reporting should be realistically viewed as simply part of a broader competence in financial management which, taken together with other functional capabilities, is likely to lead to more effective and efficient management of SMEs and significantly improve their prospects.

Key words: Growth, Financial Reporting, Competence, Effectiveness and Efficiency.

Introduction

This paper describes an exploratory study of the impact of financial reporting practices upon business growth and performance outcomes amongst small and medium-sized enterprises (SMEs) engaged in manufacturing in India. The study attempts to extend limited prior research with a similar objective, especially that of McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994). Of broad concern is the extent to which, if at all, improved financial reporting practices appear to pay-off in terms of enhanced business growth and performance in the SMEs investigated.

An early attempt to investigate this matter is reported by Hutchinson *et al.* (1975), Ray (1980a, 1980b), Hutchinson *et al.* (1981), Ray & Hutchinson (1983, 1985) and Hutchinson & Ray (1986). This study produces evidence on the manner in which financial reporting systems and practices appear to change in a small sample of SMEs as a result of experiencing rapid growth. It also attempts to contrast these circumstances with those in a matched sample of non-growth concerns. There is a clear tendency towards more frequent historical financial reporting as the former samples of SMEs grow. However, there is no significant difference between the pattern for rapid growth SMEs and that for historical financial reporting by the matched sample of non-growth concerns. As regards the type and frequency of future-oriented financial reporting in the rapid growth SMEs, there is a tendency towards more frequent future-oriented financial reporting as they grow. However, there is a dramatic contrast between this pattern for rapid growth SMEs and that for future-oriented financial reporting by the matched sample of non-growth concerns, in that the latter prepare little more than annual forecasts for profit and loss items.

This research establishes support for the broad proposition that SME growth results in increased financial challenges or problems, and that there is consequently a greater need for careful attention to financial management in

general, and financial reporting in particular, if the growing SME is to succeed in survival and performance terms. On the basis of the findings, an empirically supported case is made that improved financial control in growing SMEs can and should come about through (*inter alia*) a significant upgrading of their financial reporting systems:

- In order to monitor financial position and performance, there is a need for timely and relevant financial statements reflecting what has been achieved.
- To effectively plan for the business's future, there is a need for regular forecasted financial statements.

Thus, a more sophisticated financial reporting system is necessary to ensure that the SME's economic resources are used effectively and efficiently in pursuit of its goals. It also follows that there is a particular need in growing SMEs for the skills of financial analysis which will allow financial statements to be read and understood, whether they contain historical or forecast information.

The paper proceeds by first reviewing the limited amount of recently available empirical evidence on the relationship between financial reporting practices and business growth and performance amongst SMEs. The research data and method employed in the study are then briefly outlined. Empirical derivation of an overall measure of the comprehensiveness of financial reporting practices undertaken in the SMEs investigated is subsequently detailed. Business growth and performance measures relied upon in the research are next described. Thereafter, an attempt is made to ascertain whether associations appear to exist between the comprehensiveness of financial reporting practices adopted by SMEs in the study sample and the achieved business growth and performance of these concerns. The paper closes with a summary of findings and conclusions arising from the research.

Review of Literature

This section of the paper reviews more recently available empirical evidence of any relationships that might exist between the sophistication of financial reporting practices on the one hand and business growth and performance on the other. A search of the contemporary literature internationally has revealed only a few published empirical studies with similar focus to that of this paper.

It is useful at the broadest level to examine the meta-analysis conducted by Capon *et al.* (1990) of 320 empirical studies, published between 1921 and 1987, examining the relationship between environmental, strategic and organisational factors on the one hand and financial performance on the other. Only two investigations of the impact of 'accounting techniques' on financial performance are included in the meta-analysis, and these fail to provide any definitive outcomes. Certainly, financial reporting (however labelled) is not included amongst significant influences on financial performance mentioned in the conclusions of the Capon *et al.* (1990) meta-analysis.

Moore & Mula (1993) is a study of the role of managerial control systems, including financial reporting, in survival and successful growth of nearly 300 Australian family businesses. Moore & Mula's (1993) results clearly indicate increasing emphasis on financial reporting as businesses grow in employment terms and progress through the earlier stages (including a growth stage) of a business life-cycle model. In analysing the findings of their study of 398 small pharmacies in the United States, some of which had closed or changed hands,

Thomas & Evanson (1987) are unable to demonstrate, using multiple regression analysis, a significant association between the number and frequency of use of financial ratios and enterprise survival or profitability (measured as either net profit or net margin on sales). They hypothesise that this may be due to a lack of sophistication in financial ratio interpretation on the part of owner-managers which prevents usage from making a discernible difference. In their study of 122 small plumbing businesses located in Brisbane, Queensland, Holmes *et al.* (1990) report a weak relationship between owning a computer-based accounting system and enterprise performance measured in terms of asset turnover ratio. However, Holmes *et al.* (1990, p. 326) indicate that ‘it cannot be determined from the results whether use of computer accounting systems leads to an increase in profits or whether more profitable plumbing firms tend to purchase computer accounting systems’.

The research reported by McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) was part of a two-year investigation of the essential growth characteristics of a non-random convenience sample of just over 100 growing SMEs from a variety of industries situated in North-East England. On the basis of their investigation of correlates with the historical financial reporting practices of these SMEs, McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) believe comprehensive historical financial reporting is more likely to be undertaken by SMEs which (*inter alia*) are larger in size. McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) believe financial ratio analysis based on historical financial statements is more likely to be undertaken by SMEs which (*inter alia*) are larger in size and undertake more comprehensive financial reporting. The principal findings of McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) study of associations between the financial reporting practices of growing SMEs and their achieved growth rates and financial performance can be summarised as in Table 1.

Table 1: Correlates with Financial Reporting Practices

	Statistically Significant Associations* ($\alpha=0.10$ or better)	
	With Financial Reporting	With Financial Analysis
Enterprise Achievement		
Enterprise growth rate	none	none
Enterprise financial performance	very weak, positive	none

• - * Established using correlation coefficients, Chi-Square tests and other types of non-parametric tests of association.

Thus, for the growing SMEs in the McMahon & Davies (1991a, 1991b, 1992a, 1992b, 1994) study, there do not appear to be any substantial associations between undertaking more comprehensive financial reporting and use of financial ratio analysis on the one hand and achieved rates of growth and financial performance on the other.

Data and Research Method:

A valuable opportunity to address the research issue raised in this paper has been provided by the availability, through the Indian Government’s Economic Survey for the year 2000 – 2013 and the Annual reports of various banks providing the

finding to SME's in India. For the purpose of this study a postal survey with the name of *Best Financial Practices* was carried out in 2012 - 2013 of a random sample, stratified disproportionately over enterprise size and manufacturing industry categories, of approximately 500 Indian manufacturing enterprises that are predominantly SMEs in employment terms. The survey used a self-administered, structured questionnaire containing 53 essentially closed questions focused on enterprise characteristics and performance, and financial management characteristics or practices. Responses were received from 163 enterprises, representing a response rate of 32 per cent. Ultimately, 150 responses could be used in this research. Some marginal differences exist between the nature of respondents and non-respondents to the survey, but no significant non-response bias was discovered in relation to the matter presently of interest.

The research instrument produced data for 11 variables capturing financial reporting practices and five variables reflecting business growth and performance outcomes for respondents to the *Best Financial Practices* survey. Brief descriptions of the financial reporting and business growth and performance variables are provided later in the paper. All variables used in this research are categorical (nominal or ordinal) in nature and/or have irregular distributional properties. Thus, non-parametric/distribution free techniques of statistical analysis are employed exclusively (specifically non-linear principal components analysis, the Kolmogorov-Smirnov one-sample test, the Kruskal-Wallis one-way analysis of variance, the Mann-Whitney test and logistic regression).

Findings and Observations:

Measuring Comprehensiveness of Financial Reporting

In an exploratory study such as this, it would be overly ambitious to attempt to separately discover significant associations for each and every financial reporting practice being investigated. Rather, it was considered more appropriate to endeavour to develop an overall indication of the extent or comprehensiveness of the various financial reporting practices undertaken in respondent enterprises. This is certainly the approach taken in comparable studies in the area such as those reviewed earlier in the paper. Various means were considered for building a rating variable that captures the overall level of financial reporting practices, including essentially naïve scoring of each case in the data file on the basis of values for the key financial reporting practice variables. Ultimately, it was decided to use non-linear principal components analysis to provide a more sophisticated financial reporting measure.

Thus, non-linear principal components analysis was applied to 11 financial reporting practice variables for respondents to the *Best Financial Practice* survey, briefly described as follows:

- Whether or not an historical balance sheet is available and used by respondent enterprises – nominal study variable HISTBS with three categories reflecting historical financial reporting practices.
- Whether or not an historical profit and loss statement is available and used by respondent enterprises – nominal study variable HISTPL with three categories reflecting historical financial reporting practices.
- Whether or not an historical cash-flow statement is available and used by respondent enterprises – nominal study variable HISTCF with three categories reflecting historical financial reporting practices.

- Frequency of regular use of historical profit and loss statements within respondent enterprises – ordinal study variable FQREVPL with six levels reflecting historical financial reporting practices.
- How frequently the cash position of respondent enterprises is regularly assessed – ordinal study variable CASHPOSN with five levels reflecting historical financial reporting practices.
- Whether or not some future-oriented financial statements are likely to be obtained by respondent enterprises – nominal study variable FORPRTS with two categories reflecting financial budgeting practices.
- Whether or not future-oriented cash-flow statements are likely to be obtained by respondent enterprises – nominal study variable CASHREQ with four categories reflecting cash-flow forecasting practices.
- Horizon for future-oriented cash-flow statements – ordinal study variable CSHRQHOR with four levels reflecting cash-flow forecasting practices.
- Whether or not benchmarking is known about and employed by respondent enterprises – nominal study variable BENCHMRK with 4 categories reflecting possible use of financial ratios in historical financial statement analysis.
- Frequency with which budget comparisons of forecast versus actual results are regularly carried out within respondent enterprises – ordinal study variable FQBUDCOM with six levels reflecting use of such comparisons in historical financial statement analysis.
- Whether or not regular forecast versus actual comparisons for cash-flows are undertaken by respondent enterprises – nominal study variable CFBUDCOM with two categories reflecting use of such comparisons in historical financial statement analysis.

With 150 cases and 11 financial reporting practice variables, there are potentially over 95 observations per variable. Even though there are missing values, this ratio appears satisfactory by sample size benchmarks for principal components analysis (Tabachnick & Fidell, 1989; Hair *et al.*, 1995). In using non-linear principal components analysis to gain an overall indication of the comprehensiveness of financial reporting practices in respondent enterprises, the SPSS statistical software used was forced to produce one principal component only. This single component has an eigen value of 0.2432, and thus accounts for about one-quarter of the total variance amongst the financial reporting practice variables. Generally speaking, this is a quite normal explanatory level for a first principal component (Tabachnick & Fidell, 1989; Hair *et al.*, 1995). Loadings of the financial reporting practice variables upon the principal component extracted are revealed in Table 2.

Table 2: Loadings for Financial Reporting Practices

Variable Name	Principal Loadings	Component
HISTBS	-0.679	
HISTPL	-0.727	
HISTCF	-0.344	
FQREVPL	-0.419	
CASHPOSN	-0.373	
FORPRTS	-0.532	
CASHREQ	-0.689	
CSHRQHOR	0.219	
BENCHMRK	-0.381	
FQBUDCOM	-0.422	
CFBUDCOM	-0.354	

Notice that, with the possible exception of CSHRQHOR, all of the financial reporting practice variables load substantially on the single principal component extracted. As the figures in bold indicate, more than one-half of the loadings across the range of financial reporting practices exceed the benchmark of 0.400 (Ford *et al.*, 1986). All but one of the other loadings exceeds 0.300. Taking account of the construction of the financial reporting practice variables and the signs of their component loadings, this component appears to capture conveniently, and with some integrity, the overall extent or comprehensiveness of financial reporting practices undertaken by SMEs in the *Best Financial Practice* survey.

Object scores for the principal component extracted were saved to the data file to form a new continuous study variable FRINDEX reflecting the comprehensiveness of financial reporting practices undertaken by respondent enterprises. FRINDEX has a range from -5.46 to 1.57, and a Kolmogorov-Smirnov one-sample test with Lilliefors correction shows that it is non-normally distributed ($D=0.129$, $df=150$, $p<0.000$).

Measuring Business Growth and Performance

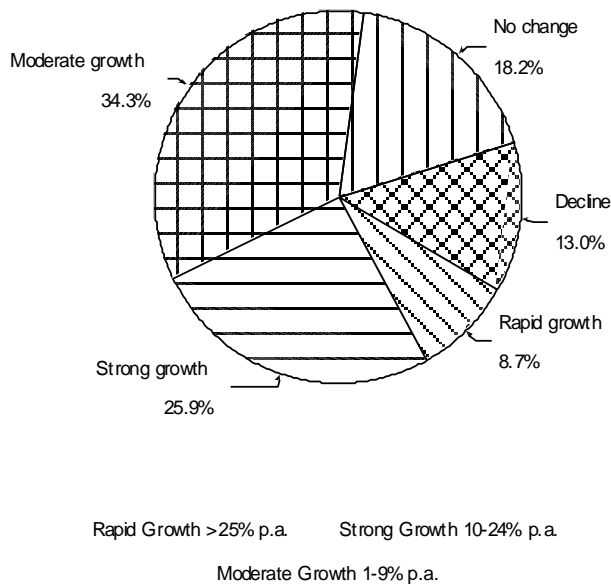
In this research, two dependent variables are used that represent business growth outcomes for respondents to the *Best Financial Practice* survey, briefly described as follows:

- Sales trends over the last 12 months for respondent enterprises – ordinal study variable SLSGROWP with five levels reflecting business growth in terms of past sales growth. As revealed in Figure 1, the modal and median response category for past sales growth is ‘moderate growth’ considered to be 1 to 9 per cent per annum.
- Anticipated sales trends over the ensuing 12 months for respondent enterprises – ordinal study variable SLSGROWF with five levels reflecting business growth in terms of future sales growth. As revealed in Figure 2, the modal and median response category for future sales growth is also ‘moderate growth’ considered to be 1 to 9 per cent per annum.

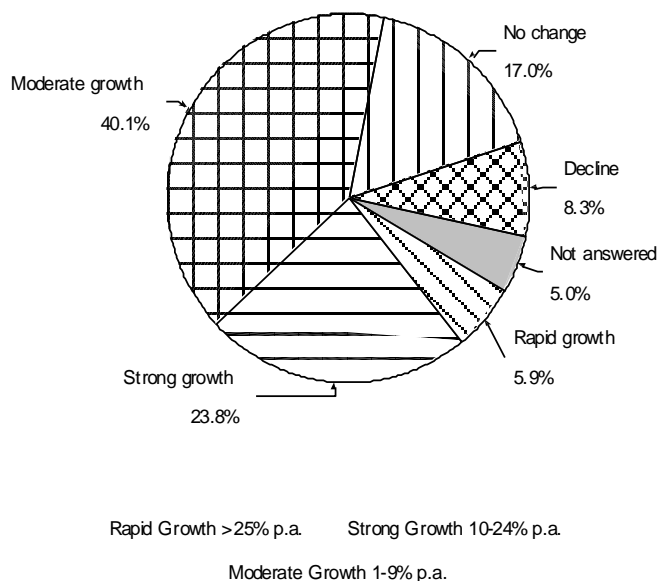
In this research, three dependent variables are used that represent business performance outcomes for respondents to the *Best Financial Practice* survey, briefly described as follows:

- Current annual sales turnover of respondent enterprises – ordinal study variable SALES with six levels reflecting business performance in terms of sales revenues. Note that, since it is essentially a reflection of output, sales turnover is treated as an indicator of enterprise performance, rather than as an enterprise size measure. As revealed in Figure 3, the modal and median response category for annual sales turnover is \$1 to 5 million per annum, but there is an extended upper tail to over \$50 million per annum.

Figure 1: Past Sales Growth in Study Sample



* **Figure 2: Future Sales Growth in Study Sample**



- Profitability of respondent enterprises relative to that of their competitors – nominal study variable PROFITAB with four levels reflecting business performance in terms of profitability. As revealed in Figure 4, the modal response category for profitability assessments in the study sample is ‘equivalent to rivals’.

- Perhaps reflecting that the variable PROFITAB involves a subjective self-appraisal, there is an unfortunately high proportion of respondents to the survey (approximately one-quarter) unsure about their profitability relative to that of competitors. For the next sub-section of the paper, this variable is modified by focusing on only those respondents able to indicate their profitability relative to that of competitors. This allows the variable to be appropriately treated as ordinal in measurement level, rather than nominal.

- Recency of an unexpected liquidity crisis for respondent enterprises – ordinal study variable LIQCRIS with three levels reflecting business performance in terms of liquidity. As revealed in Figure 5, the modal and median response category is ‘not in last 2 years’, but note the relatively high proportion of non-responses.

Associating Better Financial Reporting with Business Growth and Performance

Employing measures of the comprehensiveness of financial reporting practices and of business growth and performance detailed in the previous two sub-sections of the paper, this sub-section summarises the outcomes of bivariate and multivariate tests of possible relationships between these variables. The findings of key bivariate tests of association are as follows:

- A Kruskal-Wallis one-way analysis of variance reveals that financial reporting practices, as reflected in FRINDEX, are more comprehensive in larger enterprises in employment terms ($n=1,050$, $H=135.554$, $df=4$, $p<0.000$). Furthermore, a Mann-Whitney test suggests a statistically significant difference in the comprehensiveness of financial reporting practices between small enterprises and medium-sized

enterprises in the study sample, with these practices being more extensive in medium-sized concerns (n=1,050, U=18,772.000, p<0.000).

- A Kruskal-Wallis one-way analysis of variance with SLSGROWP as the grouping variable indicates that the comprehensiveness of financial reporting practices, as measured by FRINDEX, is statistically greater in enterprises that have recently grown more strongly in sales revenue terms (n=1,050, H=12.149, df=4, p=0.016).

Figure 3: Annual Sales Turnover in Study Sample

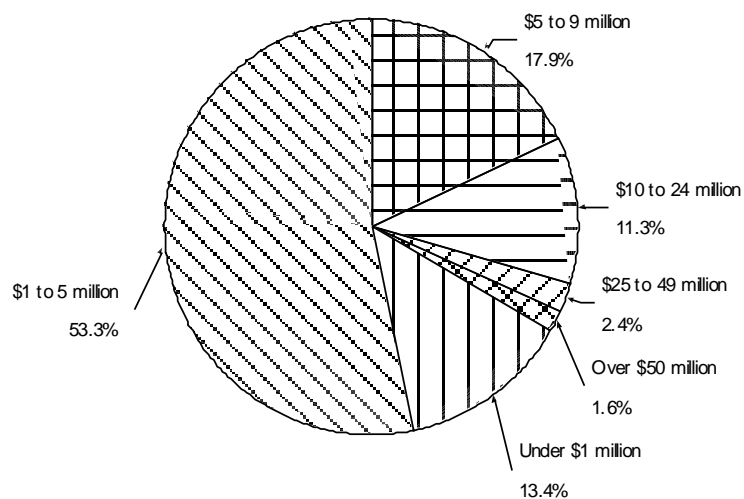


Figure 4: Enterprise Profitability in Study Sample

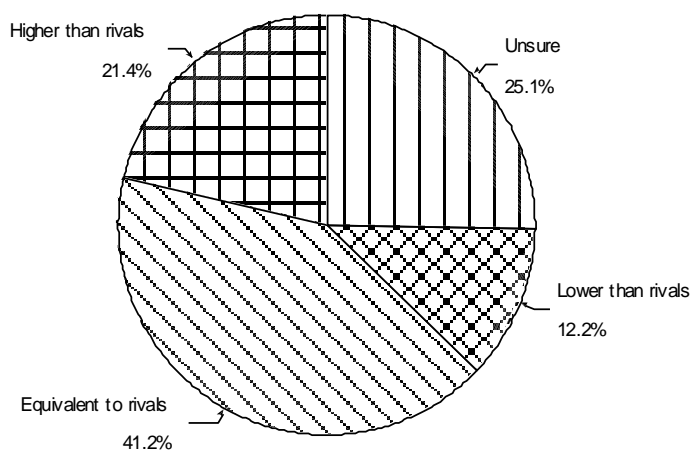
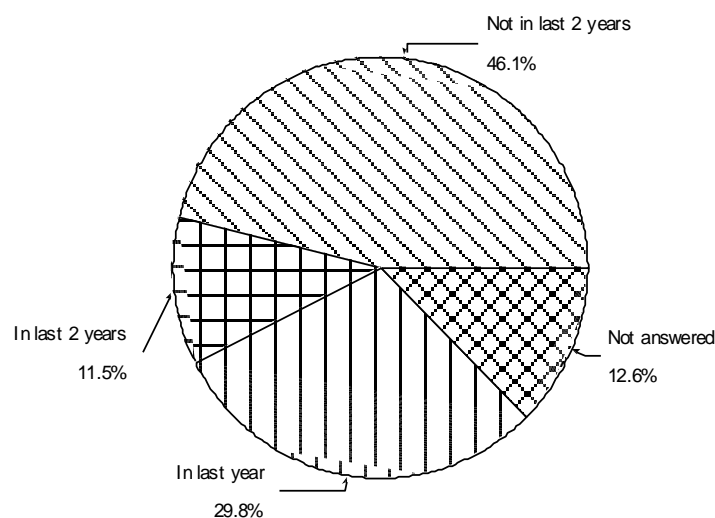


Figure 5: Liquidity Crises in Study Sample

- A Kruskal-Wallis one-way analysis of variance with SLSGROWF as the grouping variable reveals that the comprehensiveness of financial reporting practices, as measured by FRINDEX, is statistically greater in enterprises that anticipate growing more strongly in sales revenue terms ($n=1,050$, $H=18.435$, $df=4$, $p=0.001$).
- A Kruskal-Wallis one-way analysis of variance with SALES as the grouping variable indicates that the comprehensiveness of financial reporting practices, as measured by FRINDEX, is statistically greater in enterprises that have higher annual sales revenues ($n=1,050$, $H=141.893$, $df=5$, $p<0.000$).
- A Kruskal-Wallis one-way analysis of variance with PROFITAB as the grouping variable reveals that the comprehensiveness of financial reporting practices, as measured by FRINDEX, is statistically unrelated to profitability relative to that of competitors ($n=786$, $H=0.548$, $df=2$, $p=0.760$).
- A Kruskal-Wallis one-way analysis of variance with LIQCRIS as the grouping variable indicates that the comprehensiveness of financial reporting practices, as measured by FRINDEX, is statistically related in a complex manner to the recency of an unexpected liquidity crisis ($n=918$, $H=8.988$, $df=2$, $p=0.011$).

Multivariate analysis using polytomous logistic regression modelling of business growth and performance outcomes has also been undertaken for data from the *Best Financial Practice* survey. The comprehensiveness of financial reporting, as measured by FRINDEX, has been initially included along with 14 other independent variables reflecting certain enterprise and financial management characteristics of respondents. In all modelling undertaken, FRINDEX is not amongst the remaining independent variables after backward stepwise elimination of variables to yield more parsimonious models with statistical significance. Given this result, more detailed findings of the multivariate analysis are not reported here. Suffice it to say that, apart from the inevitable interactions between growth and performance measures, the key influences on SME achievement appear to be characteristics such as:

- Development orientation – reflecting how forward looking enterprise management is, what degree of commitment there is to growth, including through exporting, and enterprise size in employment terms.
- Growth constraints – reflecting a contrast or tension between wishing to retain control by avoiding external financing and the pressing need for additional funding beyond that of present owners in order to facilitate business growth.
- Business influence – reflecting a contrast or tension between belief that business success is largely internally influenced and belief that outsiders attitudes and behaviours mainly determine business outcomes.
- External funding dependence – reflecting the level of dependence upon external finance, mainly in the form of debt.
- External financial advice – reflecting dependence on outside professionals, usually public accountants, for advice on a range of financial matters.

These are clearly more fundamental and inherently more complex dimensions of SME functioning than the comprehensiveness of financial reporting, and it is perhaps not surprising that the state of financial reporting practices becomes subsumed by such broader matters when modelling growth and performance outcomes.

Summary and Conclusions

The research findings described in this paper suggest that financial reporting practices are more comprehensive in larger concerns in employment terms; and that a statistically significant difference in the comprehensiveness of financial reporting practices exists between small enterprises and medium-sized enterprises, with these practices being more extensive in medium-sized concerns. It also appears that the comprehensiveness of financial reporting practices is statistically greater in SMEs responding to the *Best Financial Practice* survey that have recently grown more strongly in sales revenue terms. Furthermore, the comprehensiveness of financial reporting practices is statistically greater amongst respondents that anticipate growing more strongly in sales revenue terms. Together, these findings establish that, at least in isolation from other influences, the comprehensiveness of financial reporting practices may have some potential as an explanatory factor for sales growth in SMEs.

There is further evidence that the comprehensiveness of financial reporting practices is statistically greater in SMEs responding to the *Best Financial Practice* survey that have higher annual sales revenues. However, the comprehensiveness of financial reporting practices appears to be statistically unrelated to profitability relative to that of competitors. Finally, the comprehensiveness of financial reporting practices seems to be statistically related in a complex manner to the recency of an unexpected liquidity crisis. Together, these findings establish that, even in isolation from other influences, the comprehensiveness of financial reporting practices may have only limited potential as an explanatory factor for business performance in SMEs.

Overall then, it would seem that financial reporting practices could exert a minor, and perhaps not an entirely unimportant, influence on some growth and performance outcomes – a finding not without value in terms of understanding the dynamics of SME development. However, it is necessary to view the findings from the *Best Financial Practice* survey detailed in this paper with realistic expectations. Given the inherently multifactorial nature of business activity and the results of

prior research in the area reviewed earlier, it would, in fact, have been somewhat surprising to see the comprehensiveness of financial reporting practices appearing to be more strongly associated with business growth and performance outcomes. It is helpful to be aware that associations between other specific managerial practices, regardless of function (production, marketing, personnel, etc.), and success in terms of survival and prosperity are likewise difficult to establish (D'Amboise & Gasse, 1980; Lenz, 1981; Capon *et al.*, 1990; Westhead & Storey, 1996). By way of an example, as part of a larger study, Westhead & Storey (1996) sought for evidence in research from Europe, Canada, the United States, the United Kingdom and Australia of a linkage between undertaking management training and SME performance in terms of survival, profits and growth. Their review concludes that the existence of such a relationship is currently not well established. Westhead & Storey (1996, p. 18) comment that 'if such a positive link exists, it requires considerably more analytical sophistication than has been applied to date'.

The apparent lack of reliable evidence for strong growth and/or performance benefits from undertaking more sophisticated financial reporting presents something of a dilemma for those who study, influence, regulate and support SMEs engaged in growth-oriented activities. Pragmatic owner-managers are likely to expect a demonstrable pay-off in terms of higher growth rates and improved financial performance before they will fully adopt the many financial reporting practices recommended to them. Suggested by the multivariate analysis briefly described in the previous section of the paper, an appropriate perspective on the issue could stem from recognition that management is a complex activity affected by a myriad of interacting internal and external factors, and must inevitably be undertaken in an holistic manner in smaller concerns. Particular practices make a contribution to the whole task without necessarily standing out as all-embracing solutions to problems generally encountered. Improved financial reporting may therefore be viewed as part of a broader competence in financial management which, taken together with other functional capabilities, is likely to lead to more effective and efficient management of SMEs and significantly improve their prospects.

It must be recognised that the majority of enterprises examined in research conducted to date could not be described as unsuccessful. In the main, they have survived what for many is a traumatic experience of growth. And some have accomplished quite laudable improvements in various measures of financial performance. Notwithstanding the research findings detailed above, one still cannot help but wonder whether the inherent stresses imposed by growth might have been ameliorated, and realised growth rates and financial performance made even more impressive, had the participating owner-managers made more extensive use of the financial reporting practices investigated. In other words, more comprehensive financial reporting could well have been a most helpful means to an end, without being an end in itself. Stevenson & Harmeling (1990, p. 11) usefully summarise the argument presented in this paper thus:

Organizational life has curious asymmetries. Many things are necessary, but not sufficient in and of themselves for success.

Promotion of any financial management practice to SME owner-managers might be attempted most appropriately on this basis.

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