

Comparative Analysis Revisited

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ABSTRACT

During a recent visit to the USA and UK the author found that comparative analysis is felt to be a useful tool by farm management academics and consultants. The reasons for the technique's poor reputation in Australia are examined and opportunities for its use discussed.

INTRODUCTION

In many developed economies overseas considerable effort is spent on the collection of financial and other data relating to farming enterprises. This data is then used to provide comparative figures and benchmarks for the industry by area. For such comparisons to be valid the information needs to be collected and analysed in a standard manner.

In the USA a Farm Financial Standards Task Force (FFSTF) was convened in 1989 to establish acceptable financial guidelines for US production agriculture (Cooper (1995)). One of its stated aims is to achieve a database of farm financial information calculated according to FFSTF guidelines. The 1991 report gives guidelines as to how it should be set up and hopes that a private firm will take up development. This database would provide comparative data stratified by region, type and size of farm. It is hoped a commercial firm would create and manage the database .

OTHER DEVELOPMENTS IN COMPARATIVE ANALYSIS IN THE US.

The process of comparative analysis has been expanded by the development of Standardised Performance Analysis (SPA). The methodology began through a coordinated effort of the National Cattlemen's Association, the National Integrated Resource Management (IRM) Coordinating Committee, and Texas A & M University Extension specialists for a cattle breeding enterprise. SPA is a standardised production and financial analysis methodology that generates reports for a selected number of performance measures. The reported production-financial performance measures and marketing descriptions were chosen by various producers, accountants, lenders and extension committees and conform to FFSTF standards. They are published as guidelines and software has been developed to facilitate their use (McGrann et al 1994a). The methodology has since been expanded to cover other livestock and crop enterprises (McGrann 1994c). While the methodology was developed by academics at Texas A&M

University, the database associated with the Cow-Calf SPA is operated by a private commercial concern.

There are a large number of organisations that collect and provide comparative data for farms in the US (Langemeier and DeLano (1990), Morehart et al (1988)). The problem is that comparison of figures between the databases is not possible as the method of collecting the data and calculating the figures is not standard. This would be overcome if they all followed the FFSTF recommendations correctly.

COMPARATIVE ANALYSIS IN THE UNITED KINGDOM

Data is collected by the Ministry of Agriculture and Fisheries (MAAF) with the assistance of several universities. A Farm Business Survey is conducted by each regional; centre (usually attached to the agricultural economics faculty of a university) and the results published annually in the form of a regional farm management handbook. Results are displayed for each of the main farming types in the region and by farm size. Some standards for financial data are published in "Definitions of Terms Used in Farm Management" (MAAF Booklet 2269)

HISTORY OF COMPARATIVE ANALYSIS IN AUSTRALIA.

After a boom in the 60's and 70's Australian Farm Management academics have been wary of comparative analysis as a advisory tool. Their concerns are expressed in the following extracts from "The Farming Game Now" by Makeham and Malcolm (1993):

A belief in the 1960's was that better farm management record-keeping and analysis was needed for farm management. Further, standardised accounting procedures would drag the accounting profession into the farm management field (if not the paddock). Linked to this was a big push to develop comparative analysis as the corner-stone of farm management accounting. It was thought that farm accountants would prepare financial statements and estimate efficiency ratios and technical standards. ...Australian Chart and Code for Rural Accounting (ACCRA) system (was developed) in response to the perceived potential for more elaborate record-keeping and analysis made possible by the developments in computers during the 1960's, allied to the belief that accounting, recording and comparative analysis were highly useful to the management of farms.

Also, there was a widespread recognition that taxation accounts ... were inadequate for farm management uses. ...hopes held .. did not materialize. Hoskins (1972) had noted that with rural accounting systems in other countries 'failure has been more common than success' and identified three major potential problems with the ACCRA system. ... lack of interest by farmers, accountants predilection for concentrating ...on tax accounting and the existence of alternative existing, competing accounting systems.

A flaw in the ACCRA system was that the usefulness of historical (original) records to farm management remained as limited as had always been the case. Further when it came to forward-looking analysis for management and planning, technical matters were omitted or inadequately included in the analysis.

A major fallacy was The belief that historical records, of technical ratios and average activity gross margins, achieved on different farms were useful for farm management analysis. They are not very useful. Farm management is about what might happen. What happened in different past circumstances is of limited relevance. The weaknesses of accounting and recording is that generally it leaves out the analysis of the critical technical and human aspects and the management economics way of thinking, and has a past, not future, orientation.

Technical ratios about output per animal or per ha tell nothing about profitability and can give opposite indications of what should be done, depending for instance, on whether output per head or output per ha is the standard which is desired to maximise (Chandler and Sargent 1962). 'League tables' of high and low gross margins and technical efficiency ratios imply cause and effect which might not be true.Even if comparative analysis were sound in theory, which it is not, it is still likely to be unreliable in practice as a guide to action.

Mauldon and Schapper (1970).....wrote 'Random Numbers for Farmers' ... which had implications for the use of comparative analysis of farm performance ratios. They started with a forceful assertion:

The connection between the title and the content of this paper is that the purposes served by those who want statistical comparisons of key or efficiency ratios and of historical gross margins between farms and between activities within a farm, could be met costlessly and punctually by sets of (almost) random numbers. This is because such Comparisons and margins are of slight use in planning, budgeting and diagnosing strengths and weaknesses in farm management, and are untimely, expensive and inaccurate.

Mauldon and Schapper added that some comparisons were, however, of some use: first, comparisons of two or more years of results from the same farm, then comparison of actual results with planned results for the same farm during one year; and comparisons of two or more sets of plans or budgets for the same farm for a future year.

These two authors also wrote about the sensitivity of inter-farm comparisons to inaccuracies of measurement and valuation (Mauldon and Schapper 1971)They said that the inter-farm comparisons of ratios and margins were 'so untimely, so expensive and so inaccurate, so historical and so inherently ambiguous in their economic meaning

as to be of slight usefulness for reliable planning, budgeting and diagnosis in farm management'.

AN ALTERNATIVE VIEW

In the light of the above why is there continued interest in standardising farm accounting procedures, industry standards and comparative databases? Firstly some of the conditions that led to Mauldon's and Schapper's pronouncements no longer hold true and secondly comparative analysis is a tool used by the accounting and finance profession in other sectors, and many question that it should not be applied to the farm sector.

One of the issues raised by critics of comparative analysis was the timeliness of the information and accuracy of the data. The comments were made in an era when the process involved farmers filling in forms and dispatching them to a distant computer. The advent of the farm desktop computer and inexpensive software means that the data can be accurate, timely and relatively cheap (a low capital cost and only a slightly greater time cost). Moreover the need for tight financial control is much greater now than in the early 70's. Accounting statements that can be accepted by farm managers, their accountants and lenders as an accurate picture of the business are sufficient reason to try to standardise the process. Contemporary Farm Accounting texts such as Libbin and Lowell (1987) and James and Stoneberg (1986), and Farm Management texts such as Kay and Edwards (1994), Warren (1992) and Langemeier and DeLano (1989) include the use of the technique.

The non farm sector make use of comparative analysis and the technique is given thorough treatment in Agribusiness texts such as Beierlein et al (1986), and Accounting texts such as Fridson (1991) and Hansen (1990). Firms such as Robert Morris Associates in the US provide comparative data for various industries and sectors. 'Benchmarking', which is essentially the same technique, is currently receiving a lot of attention in the US (Spendolini 1992). Accountants in Australia continue to see comparative analysis as a useful tool for use with farm businesses (Hardy 1994).

McGrann (1994b) believes integrated production and financial performance measures are of benefit to farm managers and the farm finance and advisory sectors. "Integrated analysis links inputs or practices with results addressing the efficiency (input-output results), effectiveness (profitability, competitiveness) and diagnostic conclusions in the light of specific goals. The analyst must establish the cause and effect relationships between each measure but must simultaneously identify interactions between different relationships". While, like other authors on the subject, he indicates a need for understanding of the limitations of the technique, he believes it improves the decision making by users. He has direct experience using the analysis with a large number of US cattle ranchers. He maintains that producers are not satisfied to only know their performance results, they want to know how well they are doing compared to others (McGrann et al 1992). There are also useful research and extension benefits such as enabling

comparison of the efficiency of production of different areas (McGrann et al 1994d) or the effects of economies of scale (McGrann 1994e).

McGrann and his colleagues have also developed the Agricultural Financial Analysis Expert System (AFAES), an expert system which evaluates a farm's operating year performance, financial condition, and projected operating year performance based on historical, current, and projected financial statement data (McGrann et al 1989).

United Kingdom academic Martyn Warren (1992) in his book *Financial Management for Farmers* notes that inter farm comparisons and analysis of the profit and loss account "extracts decision clues from an otherwise unhelpful document".

CONCLUSION

While it cannot be considered a panacea for farm financial ills, comparative analysis or Benchmarking can be a useful tool for farm managers and consultants. Farmers generally can relate to the data presented and are naturally eager to see how they compare with their peers. As with any tool it has its limitations, and should be used with these in mind, but to dismiss it completely is to lose a valuable resource. A necessary prerequisite is standardisation of the accounting methods used in the analysed accounts.

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