MANAGEMENT ACCOUNTING SYSTEMS AND RECORDS

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Second edition by M W Monaghan

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First published 1972
Reprinted 1978, 1979
Second edition 1981

Published by
Gower Publishing Company Limited
Aldershot, Hants, England.
Printed and bound in Great Britain
at The Pitman Press, Bath.

British Library Cataloguing in Publication Data

Grimsley, Bob
Management accounting systems and records – 2nd ed.
1. Accounting
I. Title II. Monaghan, M. W.
651.5 HF5635

ISBN 0-566-02349-0

Introduction

The records in this book are intended to be used by managers. Each manager must understand the words and figures being served up to him and if the presentation is not clear and obvious the system has failed in its job.

Management accounting is a tool for use by all kinds of management, not merely accountants. It is the presentation of facts to show past results which help in the preparation of forecasts for the future. The tool places managers in a position to act with confidence for the strong control of their company, yet in no way does it supplant the need for managers to keep the control or to initiate the action personally.

It is the responsibility of the accountant to help set up a system suitable to his company, to explain it to the other executives and to keep it running smoothly. If the executives ignore or misunderstand the system the company is the loser because the opportunity for strong control is being wasted and this is even more serious than the expense of running the management accounting to no purpose.

The subject centres largely around the idea that the purpose of running the business is to make a profit – highest long-term net profit. Measurement of total income, and of the various ways this has been modified through purchases and expenses to arrive at the final result, is a basic part of the work. The main subdivisions of the subject are shown by the chapter headings. Two terms call for explanation:

1 *Budgetary control* is defined by the Institute of Cost and Management Accountants as: the establishment of budgets relating the responsibility of executives to the requirements of a policy, and the continuous comparison of actual with budgeted results, either to secure individual action to achieve the objective of the policy, or to provide a basis for its revision

2 *Accounting ratios.* A ratio is the relationship of one set of facts or figures to another set, reduced to a percentage or fraction. The purpose of accounting

ratios is to enable managers to make financial comparisons of like with like, with past performance, with future expectations, with competitors and with national averages

Both budgetary control and accounting ratios are such basic parts of management accounting that they crop up in every chapter instead of being isolated in chapters of their own.

The aim in this book is to produce a practical working guide for business managers. From the general guide it is always necessary to tailor the systems and records to fit the individual business because each company is unique.

The Computer in Management Accounting

A computer will store information, accept fresh information, do arithmetic and print out many of the management accounting records. It will enable a firm to produce the records more quickly (subject to availability of operating staff) and with a greater variety of analyses.

Thus a computer is a tool for use in the management accounting function which, in turn, is a tool of management. It does not cancel the need for the systems and records, described in the following chapters, although it may produce them in a different shape and produce them more quickly. Nor does the fact that it can turn out complex sheets of figures mean that such sheets are better for the management. The simple straightforward presentation of key figures is equally important whether or not the company has a computer at its disposal. The figures remain useful only to the extent that the managers are themselves capable of interpreting what is shown.

Current Cost Accounting

Following considerable debate extending over many years and a number of false starts, an accounting standard, SSAP 16, was issued in 1980 entitled Current Cost Accounting. The stated objective was to provide more useful information than that available from historical cost accounts alone. To achieve this three main adjustments to the accounts are required: (i) depreciation adjustment (ii) cost of sales adjustment and (iii) monetary working capital adjustment.

These adjustments allow for the impact of price changes, although CCA is not a system of accounting for general inflation.

Although not applicable to the wholly owned subsidiaries of a UK registered parent, in general the Standard applies to entities with

1 An annual turnover of £5 million or more
2 A balance sheet total of not less than £2.5 million and
3 An average number employed of not less than 250

Those companies to which the Standard applies may still publish historical cost accounts as the main accounts, with current cost accounts provided in supplementary form. Companies using current cost accounts as the main accounts are still required to supply adequate historical cost information.

The accounting policies should be the same for both systems and the same tools of analysis, ratios etc., described in this book, are generally appropriate.

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Monthly Accounts

Monthly accounts are used to check progress at regular intervals. Basically they resemble annual accounts but they enable the management to check the company's progress at frequent intervals instead of waiting a whole year.

Some companies content themselves with quarterly accounts, but these are a poor substitute because a great deal can happen in competitive industry in the space of three months. Others favour fortnightly or even weekly accounts which are excellent if they can be produced accurately and quickly without undue expense. Essentials are:

1 *Simplicity.* It is better to have the main facts set out clearly than to have a lot of elaborate complications
2 *Speed.* Each day spent in preparation cuts down the benefit obtainable from these short-term records
3 *Accuracy.* Perfect accuracy may fairly be sacrificed for the sake of speed, provided that the margin of error is understood. Each firm should work out its own tolerances to reach a reasonable compromise
4 *Detail.* Departmental detail should be set out clearly for departmental managers to use. Summaries should go forward to the central management supported by copies of the detailed sheets

A budget should have been made before the start of each month. The monthly accounts will show the actual results compared to the budget. Some companies also like to make a comparison with the equivalent month in the preceding year, but this is a matter of personal choice and, in financial terms, has lost some of its relevance because of inflation. It is rather in the preparation of the budget that the preceding year's figures are likely to be of most use.

Every manager is likely to be concerned with some aspect of the month's results but it will not be necessary for most of them to see more than relates to their own

department. Each chapter in this book will suggest the distribution of accounts to managers in a typical manufacturing business. However, it should be noted that each company must work out for itself which of its executives should receive which of the accounts.

Each manager should look on it as his own responsibility to see that his share of the accounts is prepared regularly and promptly. This will be the case even in the larger company where specialist staff are engaged in the work. For example, if a departmental production manager normally receives three completed sheets by the third day of each month and one month they fail to appear, he should inquire for them on that day rather than wait an impatient week for them to turn up. If he does not fret at their absence or does not even notice, this is proof that he has not been in the habit of using the accounts properly.

In this chapter the specimen forms are presented in reverse order from the way they would be created. The master sheets intended for central management are shown first, followed by the detailed sheets from which the masters have been built up.

Graphs

For those who like the graphic representation to give a quick impression of the main facts, a variety of graphs may be devised. However, it should be realised that a graph is not a substitute for a careful study of the accounts, particularly where those accounts are showing some unsatisfactory feature of the business. Figure 1:1 is an example of a graph used in accounting.

Monthly Manufacturing Accounts

The function of the manufacturing account is to draw together all the direct costs of making the goods, with the fixed and variable expenses of running the factory in which they are made.

By showing quantities as well as figures, it draws attention to rise and fall in the volume of output as well as in value. This information is useful in itself and can be extended to show the changing costs per unit of the product.

The account has isolated the costs of the factory, which is under the control of the factory manager, from the costs of selling and of administration, which are under other authority and appear in the profit and loss account.

Master sheet for the manufacturing account

Figure 1:2 shows an example of a master sheet for the manufacturing account. No figure is shown for the more detailed review of direct expenses because these vary so

much from one business to another. The pattern for analysing them would be similar to that for Figure 1:3.

The costs of making goods are isolated from the costs of trading in finished goods and from general administrative expenses. Prime cost is a key figure because it includes only those costs which result directly from what has been made during the period, whereas factory costs would have continued with different levels of production although possibly the amount could be different.

It is important to include quantity as well as money because price changes could obscure the true level of production. The unit of measurement to use may be a puzzle if the nature of the finished product is very different from the ingredients of the raw materials. The solution is to use against prime cost the unit applicable to finished goods and have the quantity of raw material covered as in Figure 1:3.

A margin of profit for the factory may be added to the total of factory costs to arrive at the figure to be transferred to the trading account. The benefits of this system are discussed in Chapter 2. Many firms settle the amount of profit by taking an agreed percentage of the factory costs, but this has all the drawbacks of the cost-plus system which shows a greater profit when there has been inefficient and extravagant control of the business. The better plan is to make the total transferred to the account 'not more than £*x* per completed unit'.

In a company which has more than one factory it is important to distinguish between their results. To make separate manufacturing accounts for each factory is recommended, with a summary of the key figures of prime cost and factory costs to show their combined results.

Raw material in manufacturing account

Figure 1:3 shows an example of an account of raw material in manufacturing. According to the nature of the product, the summary by types of process may be used alternatively or additionally to the summary by departments. Loss in value of material may be caused by a sharp drop in market prices, wastage because of faulty manufacturing, theft, fire or other calamity. These must be the subject of a separate entry on the account sheet after the main departments but before the total. Explanatory notes should be added at the foot of the page.

Sales of scrap material correctly arising in the natural process of the manufacture should be deducted from this raw material account and only the net total carried to the main manufacturing account. This should be distinguished from sales of scrapped completed goods which are wasted by faulty manufacture. Wastage of this kind should be plainly set out on the main manufacturing account so that management may take steps to ensure that the faults are not repeated.

Direct wages in manufacturing account

Figure 1:3 shows an example of an account of direct wages in manufacturing. Man-hours is the most usual unit of measurement of quantity of labour but some firms adopt other standards. An overall picture of wages may mask several oddities which should be revealed by a more detailed analysis such as is described in Chapter 7.

Work in progress

Work in progress is shown in the form illustrated in Figure 1:4. In practice the accurate measurement of work in progress is very difficult and poor guesses are a cause of monthly accounts being inaccurate. For most factories the holding of some work in progress is inevitable. When material goes through successive stages of processing it may be desirable to keep a buffer stock of partly processed material ready to go into each stage of production. Production managers should set target levels of work in progress rather than adopt the attitude that the lowest level must be the best level. Any variation beyond the acceptable x per cent tolerance from the target level calls for detailed queries. It is costly and inefficient to hold excessive amounts of work in progress and may be specially dangerous where the product could go out of fashion or deteriorate in value for some other reason.

In some companies, incidentally, a proportion of the cost of overheads is added to wages and material to arrive at the value of work in progress. These are usually an arbitrary fixed percentage anywhere between nil and the full percentage that overheads bear to prime costs over all productions. This is very dangerous, however. The true relation of production overheads to prime cost may vary widely between products and because of changes in production techniques the relation of any product may vary from year to year.

Indirect wages in factory costs

Figure 1:5 illustrates an example of a cost statement of indirect wages in the factory. There may be many kinds of indirect workers; care should be taken that all are entered, including the suitable proportion of wages for employees whose work is partly indirectly and partly directly productive. Apprentices and working foremen and supervisors are likely to be in this group. Chapter 5 gives further details on the balancing of wages.

The specimen account for salaries would closely resemble the one for indirect wages. It is likely to include the factory manager and his assistants and the production departmental manager, the cost and records clerks, time clerks and time study staff. Care should be taken that everyone receiving a salary appears in this list or in one of the lists attached to the profit and loss account.

Machinery in factory costs

Figure 1:6 illustrates the form used to show the costs of machinery in a factory. Only factory machinery is included in this summary. Office machinery and dispatch warehouse machinery will be included in the appropriate section of the profit and loss account. Wages for maintenance engineers have been included in the indirect factory wages analysis and must not be repeated here. Some firms, however, prefer to enter them with the machinery costs and leave them out of the indirect wages.

The nature of depreciation as a cost is quite different from the running and upkeep expenses because it has no place in the outwards cash flow statement. In addition, the true measure of depreciation is not known in any single short period and the figures to be entered here would be based on informed opinion rather than an exact statement of the amount by which the machinery has actually worn out. Depreciation may be taken at an annual percentage based on the original cost price of the machine. This is known as the fixed instalment or straight-line method. It may be further improved by estimating the number of productive working hours of the life of the machine and so arriving at a fairly accurate cost of depreciation per hour, worked during the period covered by the month's accounts.

The straight-line method is suitable for machines the production capacity of which remains fairly steady throughout their working lives and which do not incur heavy expense and loss of working hours because of major repairs during the later stages. The reducing balance or diminishing instalment method of depreciation takes a higher percentage but calculates afresh each year on the written-down value instead of the original cost price. The effect is to load depreciation more heavily in the early years. This is ideal for a machine which loses efficiency and needs major repairs later in its life.

Premises in factory costs

The economical use of building space may make a considerable difference to the company's total profitability. If different kinds of production or different processes are going on in one large building, its costs may be allocated at £x per square foot. In this case, care is needed that the entire expense is taken with none being overlooked because it relates to dead space such as entrance lobbies and corridors. The following will serve as an example:

Production areas	ft²		£
Process *A*	5 000	$\frac{5}{15}$ x 30 000 =	10 000
Process *B*	8 000	$\frac{8}{15}$ x 30 000 =	16 000
Process *C*	2 000	$\frac{2}{15}$ x 30 000 =	4 000
	15 000	Total cost	30 000
'Dead space'	5 000		
Total area	20 000		

Figure 1:7 illustrates the form recommended for itemising the costs of factory premises. Electricity or other fuel used for heating and lighting the factory should not be duplicated with the fuel used for processing which may have been entered among the direct factory costs.

Building maintenance may tend to be erratic with a very heavy incidence every fourth or fifth year. It may be useful to spread this evenly by making a building maintenance reserve to be treated as an additional expense in the years when little actual maintenance or decoration is carried out. The following will serve as an example:

	ACTUAL MAINTENANCE	RESERVE		TOTAL IN THE ACCOUNTS
	£	£		£
Year 1	10	20	=	30
Year 2	10	20	=	30
Year 3	10	20	=	30
Year 4	80	−50	=	30
	110	10		120

The figure for factory general expenses would closely resemble the one for factory premises. It would include factory telephone, factory office expenses (time cards, record sheets, etc.,) and all other expenses of the factory not already dealt with in one of the previous figures.

Stock of finished goods

Figure 1:8 shows the accounting form for stock of finished goods. The variation between actual and budget will be caused entirely by quantity and not value per unit. The sales director will have to judge whether any new low level of stock shown is satisfactory or whether efforts will need to be made to bring it back to normal the following month.

Any increase in quantity and value during the month will mean that these figures must be added to the cost of goods sold shown in the trading account.

Monthly Trading Accounts

The trading account is designed to show the straight difference between income from sales and the cost of the goods sold, with a suitable adjustment for the change in value of the stock of finished goods. The result is the gross profit which is then subject to the other overhead expenses which appear in the profit and loss account. This makes it possible to isolate changes in results arising from new terms of trading

from changes caused by altering factory costs, from changes in administrative overheads or from different selling expenses.

Some of the facts revealed by these accounts are likely to have special significance for the accountant who is experienced in their interpretation. He should be encouraged to add suitable comments so that he shares the benefit of his knowledge with the departmental managers and directors who may not be so well accustomed to spotting the important points.

Figure 1:9 shows an example of a master sheet for the trading account. The purpose of the trading account is to isolate the sales of manufactured goods from the costs and problems of carrying out the manufacture. This is the sphere of the sales director and his staff, whereas the manufacturing account made a spotlight for the production director. The gross profit represents the straight difference between the sales and the cost of the goods which have been sold. There is no complication with overhead expenses which have been kept strictly to the later stage of the accounts – profit and loss accounts. When results fail to match budgets it is then possible to isolate the trouble instead of having to search through all the records. (See Figure 1:1.)

Adverse variances in the gross profit as a percentage of sales should be investigated. Some of the causes may be:

1 Increases in selling prices not keeping pace with increases in cost or purchase prices
2 A change in the mix of products sold; a larger proportion of those lines which show a lower profit
3 Inaccurate stock taking
4 Stock leakage and pilferage

The following list will suggest other reasons for gross profit deficiencies. Management would need to consider each of these until it arrived at the correct interpretation of why the gross profit was not as budgeted. In certain cases variations in profit could be traced back to prime costs, e.g. labour or fuel costs.

Sales

1 Selling prices lower than planned – accidental or deliberate reductions
2 Discounts to customers have been out of line
3 Failure to invoice goods dispatched

Stock of finished goods

1 The closing stock has been incorrectly counted or identified or priced
2 Value has dropped by a known amount because the goods have deteriorated or gone out of fashion