

# Productivity Improvement Search-Through the Concept of Interfirm Comparison

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## Abstract

In productivity improvement the following factors have to be emphasized better utilization of labour and increased motivation, more efficient planning and routing of materials, better utilization of plant, equipment and buildings, simplification of basic designs, improved methods of production and standardization of materials and parts. Interfirms comparison is a technique, which uses management ratios to compare performance of several firms in an industry. This is intended to show the management of each firm taking part, how its profitability and productivity compares with that of other firms in the same industry. If the firm's profitability is to be raised performance should be tackled because it is only through performance that profitability is to be raised. In what respects the firm is weaker or stronger than its competitors and what specific questions of policy or performance to be tackled. This paper is focused on productivity improvement through comparisons with other majoring firms.

## INTRODUCTION

There are three standards used to measure the performance of a firm its past performance, budgets, and infirm comparisons. Comparison with the past has the disadvantage that economic climate and the state of technology are constantly changing. It is therefore, impossible to know with certainty where a change over time is due to a change in efficiency or to economic and technological changes. The disadvantage of comparison with budgets is that even the best budgets depend on the estimates of the executives who compile them, with all the limitations that such an approach implies.

With inter firm comparison; there is the outstanding advantage that a comparison is made between the performance of a firm and that of other firms operating in the same competitive conditions during the same period of time. Interfirm comparison, provides independent external yardsticks against which to assess the performance of a company.

## OTHER EXTERNAL COMPARISONS

A company can compare its own result roughly or in detail with those of its competitors. It can make the comparison with the performance of individual companies or with industry figures. Comparisons with published financial accounts of individual companies may be of limited value for a number of reasons. Some of them are thus:

- i. There are a number of permitted accounting rules for dealing with particular items of revenue, expenditure; assets and liabilities. The rate of returns of any two companies may not be intrinsically comparable.
- ii. The accounts are prepared on a historical cost basis.
- iii. If the company is a member of a vertically integrated group of companies, where the end products of one company become the raw materials of another company, transfer prices from one company to another may not be market prices and the profits of individual companies in the group may not be really meaningful.
- iv. In a group company a Single product line might be produced by several subsidiary companies, each of which also produces several other products, while the parent company absorbs all research and development costs.
- v. If a company is a subsidiary of a large group, it is often difficult to separate the financing of the subsidiary from its trading activities.
- vi. In a vertically integrated group of companies, one company in the group may accept an order at a loss, but for the group as a whole, the order may be profitable. A comparison with the company accepting the order at a loss would be of limited value.

## CENTRE FOR INTERFIRM-COMPARISON

There is need for central organization to conduct interfirm comparisons on a confidential basis as a service to management. All management institutes in Association with National productivity center could conveniently set

up a center for interim comparison. As non profit making organization, its services should not be confined to members of sponsoring organization but made widely available to industry and trade. The objectives the center should be to:

- i. Run seminars on management ratio and interfirm comparison-some of a general nature, and others designed for particular industries and trades.
- ii. Carry out research aimed at making the best methods of comparison available to Nigerian industry and trade.
- iii. Undertake interfirm comparisons by direct arrangement with individual
- iv. Offer a special service to trade associations, acting on their behalf as a "neutral" expert organization for the promotion and conduct of interfirm comparisons among their members.

## **BACKGROUND LITERATURE**

### **The Process of Interfirm Comparison**

A comparison to be organized by the center will go through a number of stages. First a number of firms, which are sufficiently numerous to make a comparison between them worthwhile, is built up by the center, usually acting with the close co-operation of the relevant trade associations. The next stage is to visit each of the participation firms to discover more about its mode of operation and to find out what information about its activities it can readily provide.

With this information, the Staff of the center will then devise a set of rations which, on the one hand provides them first with the information that they want, while on the other hand it does not put inordinate demands upon the account and other departments to provide the necessary basic information. The center then sends a questionnaire to participating firms which provides all the information required when completed. With the questionnaire, participants are sent definitions of all terms used so that each can be sure that the figures have been arrived at on a strictly comparable basis. This assurance is necessary since accountants use different terminologies, definitions and valuation principles. When the questionnaire are returned to the center they are checked and, if necessary, the figures are amended after discussion with the firm concerned.

A general report is then prepared and sent to each participating firm. This report will contain all the rations for each form, together with back ground information which enables the participants to compare their firms with those firms most similar to their own. If there are general conclusions to be drawn from the figures as a whole, these are incorporated in this report.

Senior members of the centre's staff then write an individual report which interprets for each individual participant the conclusions which it seems he should draw from figures in the general report. The reports could - be discussed at follow \_ up meeting of the firm between members of their top management team and senior personnel from the center.

### **CONFIDENTIALITY AND COST**

The center should be completely independent and no information supplied to it by companies should be passed to any other organization. The results of interfirm comparisons are made available to participating companies only. In the reports, the comparative data showing the figures for participating firms do not, of course, appear under the name of the firm, but under code numbers. The data are expressed in ratio, percentage and similar statistical forms rather than absolute figures, which reduce the possibility of identification.

It is impossible to quote in advance a price for the service because It will vary according to the amount of time and expense incurred in building up the comparison group the amount of details to be covered by the comparison, whether firms need to be visited (for example, to discuss the arrangements for, or the results of the comparison), and the amount of individual written interpretation provided. However, for each comparison scheme a definite fee is quoted before companies are asked to commit themselves to participate.

## **PRESENTATION**

### **MANAGEMENT RATIOS APPLIED TO INTER-FIRM COMPARISONS**

Table I shows the set of the major management ratios covered by inter-firm comparison and mentions why the individual ratios are chosen (1) The following is (much condensed) example of a comparison (2) Here are the ratios of a firm in a light engineering industry, Rockydo Engineering firm, for two years,

Table 1: THE FIRM'S OWN FIGURES

|     | RATIO                                       | UNIT | LAST YEAR | THIS YEAR |
|-----|---|------|-----------|-----------|
| 1.  | Operating profit lope rating assets         | %    | 8.25      | 10.0      |
| 2.  | Operating profit Isales                     | %    | 5.5       | 6.1       |
| 3.  | Sales I operating assets,                   | time | 1.5       | 1.64      |
| 4.  | Operating assets I Average                  | days | 249       | 222       |
| 5.  | Production cost of sales I sales            | %    | 71.0      | 70.4      |
| 6.  | Distribution and Marketing Expenses I sales | %    | 17.7      | 17.7      |
| 7.  | General and administration expenses/sales   | %    | 5.8       | 5.8       |
| 8.  | Current assets/Average                      | days | 215       | 188       |
| 9.  | Fixed assets/Average daily sales            | days | 34        | 34        |
| 10. | Material stocks/Average daily sales         | Days | 49        | 49        |
| 11. | Work in progress/Average daily sales        | Days | 53        | 46        |
| 12. | Finished stock I Average daily sales        | Days | 52        | 39        |
| 13. | Debtors I Average daily sales               | Days | 61        | 54        |

Days required to turn the asset over once:

The firms report looks like a success story. Profit on assets employed has gone up from 8.25% to 10.0% due to an increase in the firm's profit on sales (ratio 2), and the better use it seems to have made of its assets (ratio and 3a). The higher profit on sales seems to have been achieved through operational improvements, which resulted in a lower ratio of cost of production (ratio 4). The firm's faster turn over of assets ratio 3 is due mainly to a faster turnover of current assets (ratio 7) and this in turn is due to accelerated turnovers of working progress (ratio 10). Finished stocks (ratio 11) and debtors ratio 12).

But the firm's illusion of Success was shattered when it compared its ratios with those 01 other light engineering firms of its type. The following table is an extract from the resuts.t gives the figures of only 5 of the 22 participating firms. Our figures are shown under latter "C", Table 2. '

This year, the firm's ("C") profit on assets employed is well below that of two other firms,' and this appears to be due to its profits on sales (ratio 2) being relatively low. This in turn is mainly due to the firm's high distribution and marketing expenses (ratio 5). In the actual':, comparison, further ratios were given, helping firm C to establish to what extents its higher ratio 5 was due to higher costs of distribution and warehousing, higher cost of advertising. and sales promotion, or higher costs of other selling activities (e.g.). Cost of sales: personnel)

Table 2: THE INTERFIRM COMPARION RATIO FIRMS

|     | A   | B    | C    | D    | E    |      |
|-----|---|------|------|------|------|------|
| 1.  | Operating profit lope rating assets %       | 180  | 14.3 | 10.0 | 7.9  | 4.0  |
| 2.  | Operating profit sales %                    | 15.0 | 13.1 | 6.1  | 8.1  | 2.0  |
| 3.  | Sales /operating assets (time)              | 1.2  | 1.09 | 1.65 | 0.98 | 2.0  |
| 3a. | Operating assets / Average daily sales      | 30.4 | 335  | 222  | 372  | 182  |
| 4.  | Production cost of sales %                  | 73.0 | 69.4 | 70.4 | 72.5 | 79.0 |
| 5.  | Distribution and marketing expenses/sales % | 8.0  | 13.1 | 17.7 | 13.7 | 15.0 |
| 6.  | General and administrative expenses sales % | 4.0  | 4.4  | 5.8  | 5.7  | 4.0  |
| 7.  | Current assets/Average daily sales          | 213  | 219  | 188  | 288  | 129  |
| 8.  | Fixed assets/Average daily sales            | 91   | 116  | 34   | 84   | 53   |
| 9.  | Material stocks/Average daily sales         | 45   | 43   | 49   | 65   | 29   |
| 10. | Work in progress/Average daily sales        | 51   | 43   | 46   | 62   | 52   |
| 11. | Finished stocks/Average daily sales         | 71   | 59   | 39   | 93   | 22   |
| 12. | Debtors/Average daily sales                 | 46   | 74   | 54   | 69   | 26   |

### RECOMMENDATION

In productivity improvement, there are factors that have to be emphasized, better utilization of labour and increased 'motivation, more efficient planning and routing of materials, better utilization of plants equipment and buildings simplification of basic designs, improved methods of production and standardization of materials and parts.

The center's confidential reports will show the firm how well its overall performance compares with those of the other participants and why it differs from theirs. The less efficient the firm, the more it stands to gain from participating in the scheme. The more efficient firms will drive much useful information from the comparison.

Interfirm comparison data produces a more realistic starting point in the analysis of a company's past performance in relations to that of its competitors than direct comparisons with published accounts. The interfirm comparison will enable the management to determine where and why its performance is better or worse than that of its competitors but it will not necessarily tell it how to improve it.

### **CONCLUSION**

The object of interfirm comparison is not arrived in overall conclusions about any industry that may manage each participating firm with a diagnostic tool which throws into sharp focus otherwise undetected weakness in the firm's operating policy and performance. There must always be some areas in which the most successful firm can strive to improve.

It should not be assumed that interfirm comparison schemes overcome all the weaknesses of direct external comparison. No two companies are strictly comparable in that they market exactly the same products for the same markets. Even after detailed analysis of the interfirm comparison data, further studies will often be required before detailed recommendations for improving performance can be made. It is no use participating in the scheme without utilizing the information in order to initiate action on productivity improvement as a result of the interfirm comparison data.

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