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Short article

## Toward improved benchmarking indicators

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### Abstract

Benchmarking is a process which continuously measures the products, services and operational practices of a given organisation to compare the organisation's performance and operational practices with a selected sample group. It is a good development tool because, in addition to creating a basis for comparison, it enforces a self-critical approach, indicating the points of operation the company must improve. Benchmarking is coming into increasing use in telecoms by management, regulators and international agencies like ITU and OECD, and offers potential for many useful applications. However, benchmarking must be used with caution, and its design as a tool of analysis must be thoughtfully considered in order to achieve accurate and meaningful indicators. The specific aspects of production, and the companies to be used for benchmarking comparison must be carefully selected. Some possibilities for developing dynamic benchmark indicators are explored. © 2000 Elsevier Science Ltd. All rights reserved.

*Keywords:* Benchmarking; Indicators; Strategic planning; Productivity measures

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### 1. Benchmarking for the telecom sector

'Efficient benchmarking is a link between the desire to learn from other companies and the need for strategic allocation of organisational resources. Strategic planning supported by benchmarking enables any organisation to focus the change in management capability on areas where it yields the best return through improving quality, productivity and customer satisfaction' (Watson, 1992).

The term benchmarking originated from the machine construction industry and refers to grouping technical and financial indicators for comparison amongst companies or across operating units within a company. The output is produced through comparing the key performance indicators of companies operating in comparable environments. It is a significant tool, which

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enables management to develop a company's short-, medium- and long-term strategies, and its financial and operational objectives (Carey, 1995). Various companies, in particular service providers, have developed benchmarking methods for evaluating their own performance. Benchmarking is now being developed for expanded applications in the telecoms industry. (Xavier, 1991, 1996; Institute for International Research, 1997). This paper examines some of the issues that will be relevant for applying and analysing benchmarking indicators in the telecom context.

Benchmarking helps both to define the best possible indicators for comparison and to obtain a picture of the company's entire operation. For any company, a primary evaluation criterion is efficiency. It is generally assumed that the more efficiently a company operates, the more profit it will generate and the more secure its future will be. Efficiency is more indicative than profitability because it cannot be as easily manipulated to achieve short-term objectives. It is expected that an efficient company will:

- withstand market competition;
- be less sensitive to unfavourable changes in the environment; and
- be more likely to use indicators to link the best of its short- and long-term goals.

For evaluating telephone operators' efficiency, often a key indicator used is the number of main lines per employee. However, it has been determined that this indicator does not unequivocally reflect a company's efficiency. Therefore, additional indicators need to be defined, for example revenue per employee, or revenue per main line. An auxiliary indicator, revenue, could be introduced between the number of main lines and employees. Figs. 1 and 2 test this hypothesis by comparing data from a number of different public telecoms operators.<sup>1</sup> This analysis reveals that the revenue per mainline is often almost constant, thus the exactitude of benchmarking has not been much improved with this step. Further, per main line is heavily influenced by the nature and extent of price controls on an operator.

Return on assets is another often used indicator which shows the utilisation rate of circuit price, and cost of supply. This can be a dangerous method because critically dimensioned circuits are extremely sensitive to errors. A generally expressed concern is that life cycles of companies include clearly distinguishable periods that can be described by indicators other than efficiency, such as an intensive development phase when many employees are working on construction of new networks (i.e. on "laying the foundations" of a future efficient operation). This period is characterised by the intensity of development; therefore aiming for mechanical improvement of the main lines per employee indicator would expressly be inaccurate. Excessive focus on the efficiency indicator can lead to unsubstantiated justifications, e.g. downsizing the development staff may produce short-term results but in the long-term could be definitely harmful (Carrigue, 1996).

Revising approaches to conventional telephony benchmarking is also warranted as there are now few operators left who only offer telephone connections. In the area of telecoms, companies are emerging with a much wider scope of activities than simply operating telephone lines. As a result of liberalisation the scope of activities of a company may vary to a great extent. Some telephone operators serve only smaller or local regions. Others, like the American MCI or the Japanese KDD exclusively provide long-distance and international circuits.

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<sup>1</sup> Further details about the data and calculations in all figures can be obtained from the authors.

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