# The false promise of "what gets measured gets managed"

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#### **Keywords**

Management, Measurement, Share prices, Waste, Logic

#### **Abstract**

Discusses the importance of precise communication as a prerequisite to achieving alignment between internal and external stakeholders. Consideration is given to popular management catch-phrases in general, with specific analysis of the widely-used statement: "what gets measured gets managed' The application of mathematical logic shows this to be a false statement, yet one that precipitates the management of measurements that may not add value as seen by the end-use customer.

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Management Decision 38/9 [2000] 612–615

MCB University Press [ISSN 0025-1747]

#### Introduction

Senior executives, particularly those managing large public-owned business, often speak in general terms when addressing key stakeholders such as employees, suppliers, customers, and investors. Management's statements become grander, but usually more vague, as the need for significant change increases (Table I). The words sound good and give the clear impression that management understands the issues facing the company, and that they have suitable remedies for lacklustre performance. The remedies, some of which are presented as "quick hits", have great appeal to institutional investors and can result in higher stock prices. Rapid positive feedback from the investment community, people who are also presumed to be quite knowledgeable, affirms the effectiveness of senior management's rhetoric.

Is it safe to assume that the senior managers understand their own rhetoric? Perhaps in a few cases, but generally not, as evidenced by the fact that most change initiatives fall short of expectations or fail all together (Morden, 1997; Longenecker et al., 1999; Appelbaum *et al.*, 1999a; 1999b; 1999c). Senior management generally has difficulty comprehending the totality of the changes that they seek to implement, including both gross and subtle dependencies (Mikami, 1982; Emiliani, 2000a). In practice, the ordinary outcome is widespread confusion, frustration, and dissatisfaction. These are forms of waste that management often ignores, preferring instead to force results in order to meet commitments made in public (Emiliani, 1998).

Senior managers often utter the phrase "what gets measured gets managed" (Martin

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and Kover, 1996; Browne, 1997; Yoder, 1998; Silverstein, 1999). It implies pushing accountability to lower levels and more active management of new or existing business measurements, in order to achieve the desired goals. This phrase is stated as an axiom, a self-evident or universally recognized truth, and is accepted without formal proof.

Most people readily assume that if senior managers utter such an expansive statement, then it must automatically be true, as he or she must surely have the real-world experience to be able to claim its veracity under all conditions. The executive's experience, rank, responsibility, authority, pay, or respect granted by others helps to cement this common view. The purpose of this paper is to examine the statement "what gets measured gets managed" to determine its truth by using mathematical logic.

## I Proof using mathematical logic

The statement "what gets measured get managed" can be written as: "if X gets measured, then X gets managed", where X is any business measure under consideration. Statements structured as "if-then" are called conditional statements in mathematical logic (Solow, 1990) and consist of two simpler statements: the hypothesis "if X gets measured" and the conclusion "then X gets managed". In mathematical terms,

Hypothesis p: "if X gets measured" Conclusion q: "then X gets managed"

Symbolically written as:

 $p \rightarrow q$ 

or in words as:

"if p, then q"

The arrow pointing to the right is referred to as the conditional operator. In order for this M.L. Emiliani The false promise of "what gets measured gets managed"

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 Table I

 Managements statements and unanswered questions?

What the manager says	Unanswered questions
"We will rationalize our R&D portfolio"	How? By what process? Who should be involved?
"Our goal is to leverage our brands and become the market leader"	Will regional marketing become centralized? Will new products be introduced in a coordinated fashion world-wide? Will packaging be standardized?
"Becoming a learning organization is critical to our future success"	What is a learning organization? How will we know when we become one?
"We must partner with our key suppliers"	Who are our key suppliers? Why types of individual behaviors support partnerships?
"Knowledge management must become a core competency"	Is knowledge management the same as information technology? Will managers have to behave differently to facilitate knowledge management?
"Customer satisfaction is our number 1 priority"	Who is the customer? How will customer satisfaction be measured? What must we do to become customer-focused?

statement to be true, the conditions shown in Table II must be satisfied.

Table II is called a "truth table". Constructing a table for the statement "if X gets measured, then X gets managed" yields the results shown in Table III.

Notice that the truth values for  $p \to q$  in Table III differs from that shown in Table II. Thus, the statement "if X gets measured, then X gets managed" is false. But why is this so? The explanation is shown in Table IV.

In other words, there are conditions in business under which measurements and

Table II
Truth table

p	q	$\boldsymbol{p} \to \boldsymbol{q}$
True	True	True
True	False	False
False	True	True
False	False	True

 Table III

 If X gets measured, then X gets managed

р	q	$\mathbf{p} \to \mathbf{q}$
If X gets measured	Then X gets managed	False
If X gets measured	Then X does not get managed	True
If X does not get measured	Then X gets managed	True
If X does not get measured	Then X does not get managed	False

Table IV Explanation of the measurement and management of X

$\mathbf{p} \to \mathbf{q}$	Rationale
False	Measuring X does not require X to be managed
True	Measuring X does not mean that X gets managed
True	Not measuring X does not mean that X gets managed
False	Not measuring X does not mean that X will not get managed

management of the measures are dissonant. We know this from direct experience. It is critical to note that there is an assumption contained in the statement "what gets measured gets managed". It is that the measure gets managed effectively, which means that the desired effect is achieved. But often the desired effect is not achieved (Beck, 2000; Schrage, 2000; Holmes and Leeds, 2000), or it can come at the expense of one stakeholder over another (Maremont and Berner, 1999; Julien, 2000). Again, we know this from direct experience, which further supports the outcome shown in Table III.

For example, purchase price variance remains a key measure for many purchasing organizations. It is designed to ensure conformance to purchased material budgets over specific periods of time, usually monthly. A buyer with a budget of \$1,000 is doing a great job if he or she can obtain the required materials for \$900 and a very poor job if the materials are purchased for \$1100. But markets change, and materials can not always be purchased at prices contained in budgets developed many months earlier.

Regardless, the buyer's performance is considered poor if the price variance is unfavorable, and will likely have an impact upon the buyer's annual performance appraisal. As a result, buyers will mismanage or "game" the measure to ensure a more favorable outcome, even if it means resorting to questionable behaviors. Buyers may seek to hide large favorable variances on some parts, in order to make up for unfavorable variances on other parts. While an overall favorable variance

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appears to have been achieved, the root cause of variance remains hidden. Which is the more valuable skill to possess: root cause analysis or gaming measures? Unfortunately, employees tend to mirror the behaviors of executives, many of which are skilled at gaming measures (Emiliani, 2000b).

Measures related to research and development are also subject to mismanagement through systems that strongly reward innovation. Without doubt, innovation is very important to the growth of companies and achieving customer satisfaction. However, this can come at the expense of fundamental operating performance. For example, many firms reward engineers for generating patents even if they are not closely related to the current or planned products. This can drive engineers towards the singular goal of obtaining patents, with a concomitant loss of customer focus.

However, manufacturing companies generate revenues from continuing operations, which in competitive markets demands cost performance. This can be achieved by using existing production parts in new product designs when possible. While not very glamorous from an engineer's perspective, the use of standard parts lowers development costs, shortens lead times, improves cash flow, reduces working capital, increases inventory turns, and lowers part cost. The benefits to the business are profound, and will generate benefits for the other key stakeholders as well. Thus, measures that balance both innovation and parts standardization will contribute greatly to competitive advantage.

### Summary

The phrase "what gets measured gets managed" is usually accepted as a true statement without question, and is regularly presented as the appropriate way to think under all circumstances (Harris-Jones, 1998; Serven, 1999; Narayanan, 2000). However, this statement has been proven to be false under conditions where it is presented as an axiom. Therefore, great care must be taken to clarify its meaning and scope, in order to ensure proper application (Stone, 1998; Mazur, 2000) that results in value as viewed by the end-use customer (Ohno, 1988; Womack and Jones, 1996; Emiliani, 2000a).

Alignment among internal and external stakeholders can not be achieved if there is confusion over the meaning of statements made by senior managers (Emiliani, 2000a). Function-specific business measures within or between stakeholders can easily conflict with each other, yet they are rarely evaluated to ensure consistency and value-added. In addition, conflicting measures create conditions that support defective individual and organizational behaviors, which can result in a debilitating inward focus and loss of productivity (Emiliani, 1998).

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### **Application questions**

- 1 What other popular management phrases have you said or heard that should be formally tested to prove their truth?
- 2 Would you continue to repeat such phrases if they are proven to be wrong?
- 3 Do senior management have an ethical responsibility to their stakeholders to ensure the truth of their rhetoric?