AN AXIOLOGICAL CONCEPT OF ORGANIZATIONAL EFFICIENCY: A MEASURE

(TOWARDS MEASURING THE EFFICIENCY OF FIRMS)

Francisco Parra_luna

parraluna@cps.ucm.es,vivianpa2000@yahoo.es

Any company concerned about its **overall efficiency** and aware of the complexities of an age in which technique, information and knowledge prevail, can hardly ignore the existence of balanced scoreboards, tools that measure to what extent it reaches its objectives. This instrument is so essential that there is scarcely a company of any prominence without it, but that does not necessarily mean that it meets all the necessary and possible requirements of the information age.

It is generally acknowledged that, like the notions of industrial and commercial companies, the traditional balance sheets and income statements of classic accounting schemes have grown obsolete. Businesspeople and analysts realized decades ago that the standard financial statements presented by companies at year-end failed to provide the information needed to judge a company's actual value or the quality of its governance. The reason, among others, was that they did not reflect such important aspects as the social (employee attitude) or intellectual (expertise or know-how) dimensions of the organization. The history of the Social Audit since the nineteen seventies in Europe and the US reflects this change. Two governments (France in 1977 and Portugal in 1985) even made the Social Audit mandatory for all companies with a certain headcount. In Spain, the first organization to implement social audits was the former INI (national industry institute), followed by financial institutions and corporations (Fundación Rumasa, Banco de Bilbao, Caja Madrid and so on). The initial interest has since waned, however.

A number of papers has recently appeared, in the US particularly, revitalizing the "Social Audit" concept under the term "Balanced Scoreboard", reflecting the growing conviction that moral or intellectual capital and assets should not be invisible in company reporting. The tool is, of course, also intended as an aid for strategic management. Despite their recent publication, however, these papers are still lacking both a systematic theoretical approach and operational itemization. On the one hand they do not build from an overall axiological theory covering company stakeholder needs; and on the other, they fail to suitably separate objective from objective achievements. Finally, no provision is made for strictly comparable standardization of information. Nonetheless, the approaches adopted initially by Kaplan and Norton (1997) and followed in several papers authored by a consultant firm, Horvath & Partners, and summarized in Horvath & Partners (2003), focus on reducing the scoreboard indicators to the most strategic items and intensifying management and control as needed to reach the goals proposed. What they advocate is a Strategic, more than a Comprehensive Balanced Scoreboard (not all the indicators are included).

Other interesting tendencies address concepts such as "Corporate Social Responsibility" or the measure of the various forms and denominations of a company's intangible assets (intellectual, human, social, relational, structural, organizational, technological, customer-oriented and so forth). Some of these will be mentioned below in connection with the calculation of the "Corporate Intelligence Quotient" (CIQ) and many have been the object of reports by companies of the prominence of Telefónica, Colgate-Palmolive, Eisai Co. Ltd, Samsung and World Bank to name a few.

The methodology adopted on the occasion of the present study, termed Corporate Balanced Scoreboard (CBS), draws from the various methodologies proposed by other authors. The present approach attempts to include the characteristics listed below, some of which embody some degree of theoretical or operational added value with respect to prior formulations.

a)   The theoretical basis for this scoreboard is the Reference Pattern of Values and the corporate stakeholders described in Parra-Luna (2001); in other words, it corresponds to systemic wholes.

b)   It covers both social and economic aspects.

c)   It uses both objective (statistically recorded facts) and subjective (quantified record of opinions) data.

d)   It standardizes data in coefficients that fluctuate around the number one, facilitating interpretation and comparison as well as integration in more complex indices.

e)   It includes standard management control through routine "forecast-follow through-deviation" procedures.

f)   It subdivides the results by department or area of responsibility as well as by Reference Pattern values and their component indicators.

g)   Since standardized indicators are used, the results can be charted on graphs for readier evaluation.

This CBS pursues three primary objectives:

1.   To serve as an aid for the best possible diagnosis of a company's situation, showing its strong and weak points with a view to identifying suitable remedies.

2.   To provide for strategic planning based on a second selection and discussion of the indicators regarded to be most decisive for the company at any given time.

3.   To re-establish integrated and standardized management control with comparable indices.

The stages of periodic CBS formulation (monthly, semi-annually, annually) are much the same as in conventional management control, namely,:

a) Preparation

1.   Establishment of the general outline of company policy for each financial period considered in the context of the company's long-term mission.

2.   Formulation of a list of (objective and subjective) indicators that translate the policy defined in the preceding item.

3.   Establishment of the scores to be attained in each of the indicators on the grounds of the previous year's results and objectives for the following year.

b) Follow-through

4.   Performance of the necessary action to reach the proposed levels.

5.   Analysis of the deviations at the end of each period, presenting a chart classifying efficiency levels by department or area of responsibility.

6.   Routine meetings with the various department or area managers to correct possible deviations, after analyzing the aetiology or cause.

In short, the primary difference between this CBS and the former "Social Reports", "Social Audits" "Corporate Social Responsibility Reports" and similar lies in the fact that the CBS is an analytical tool to be used for in-house or strategic purposes rather than for public reporting.

The foregoing discussion has been leading up to the key concept of this paper, "business efficiency". Vengo sosteniendo que la empresa no puede proporcionar bienestar social si no es eficiente, luego la definición del concepto de "eficiencia empresarial" vendría a convertirse en el punto final del presente traThe author has consistently sustained that companies cannot provide social welfare if they are not efficient. Hence, the definition of "business efficiency" is the final point of the present paper, the point where it will be sustained that the social welfare (SW) provided by a country's companies depends largely on the overall business efficiency (BE) attained.

Indeed, it would be to little avail for companies to engage in "philanthropy" or reach suitable levels of so-called "corporate social responsibility" if by so doing they were to jeopardize their **overall efficiency**. This concept is regarded here to be more inclusive, from a theoretical perspective, because it is based on the Values/Stakeholder matrix and systematic inter-company comparison or benchmarking, both of cardinal importance to company durability.

Moreover, the enormous economic effort that companies need to devote to R&D+i may prove to be incompatible with many of what may be regarded to be "social" expenses or related items. Under such circumstances of technological disadvantage, which must be remedied to ensure overall economic development, it may be correctly sustained that companies' true contribution to a society's welfare consists in prioritizing – absolutely and above and beyond many other aspects and expenses of apparent social significance – the implementation of relevant scientific research and technological innovation programmes. Consequently, indicators such as presented in the general list under value 5, "Knowledge" in the above Corporate Balanced Scoreboard, should carry

a much higher relative weight than others, either in number or relative individual weight.

But not only do the indicators focus on the Knowledge value: the entire CBS has been designed around the need for progress in innovation and new technologies, and for knowledge to flow to and from staff, suppliers, customers and company networks in an effort to join forces to their mutual benefit through their responses, ideas, suggestions and projects.

The concept of "efficiency" presented in this paper should, therefore, entail a series of theoretical dimensions of overall importance, whose operational definition should be highly demanding in terms of competence-related content. What this means is that companies labelled as "efficient" under this approach (i.e., those with an overall index greater than one, as discussed below) will be able to ascertain that they in fact are presently and will continue to be efficient in the future, and that such efficiency is measured with respect to relevant competitors. In the end, then, given the predominant role of private enterprise in modern society, the concept of Social Welfare is gong to hinge almost exclusively on Business Efficiency, the backbone of any national economy.

On these assumptions, the relevant question is: when can a company be said to be efficient?

Providing an appropriate or scientifically valid answer to this question involves solving certain basic theoretical problems. The first necessitates practically denying a more or less accepted hypothesis according to which the concept cannot be measured. Such a hypothesis, as formulated below, can be found throughout the scientific literature on organizations:

"Efficiency in organizations cannot be measured or calibrated for want of a general comparative model."

And it has been sustained by most scholars addressing the subject (Edwards et al., 1986).

Nonetheless, many authors have attempted to measure organizational efficiency empirically. Miles (1980), for instance, used 29 measurements; Campbell (1977) 30 criteria; Mahoney (1977) 114 variables; and Seashore & Yutchman (1967) 76 different indicators. Some authors (Dalton and Kesner, 1985) even claim that the number of possible measurements is nearly infinite, while all stress the difficulty involved in standardizing measures for comparison. Generally speaking, positions range from those (such as Goodman, Atkin and Schoormann, 1983) who propose a moratorium in the analysis of organizational efficiency until better inter-subjective conditions are in place, to those who propose definitively abandoning the idea in light of the utter impossibility of every reaching agreement (such as Hannan & Freemann, 1977).

There are, naturally, authors (such as Morgan, 1980) who believe that such an agreement is not impossible or who argue that the decisive importance of the concept precludes abandonment if the aim pursued is to understand and improve business organizations (such as Peters & Waterman, 1982; Handy 1993 and in general the Total

Quality Control movement. More recent but likewise theoretically disoriented approaches can be found in Mullins, 1996).

In short, from the earliest attempts quoted above to the most recent papers of which this author is aware such as Puig-Junoy (2000), Surruca (2003) or Vergés (2004), which have signified important advances in the definition of the concept, the hypothetical impossibility of the endeavour may still be said to be accepted. The explicit rationale for this hypothesis is based on the **lack of a general comparative model able to generate the necessary agreement among experts.**

The present paper has, however, attempted to show that such a model exists, subject only to deployment of the respective effort to attain theoretical integration, thereby eroding the scientific grounds for the above hypothesis on the Reference Pattern of Values (see Parra-Luna, 2001).

Assuming, for the time being, the existence of a valid model, the second problem consists in the broad polysemy of the term "Efficiency" itself, and the equally broad overlap with other synonyms, discussed by several authors. In this regard, confusion may be said to abound among terms such as "Efficacy" (when the company reaches its stated objectives); "Effectiveness" (when its stakeholders accept company results); "Efficiency" (when the company maximizes overall rationality); "Profitability" (when the measure is the capital gains generated); "Productivity" (when production is related to the number of employees); "Success" (when the ultimate long-term ends pursued are attained); "Growth" (when turnover increases from period to period); "Development" (when certain desirable levels are reached); "Excellence" (when financial profitability and company enlargement prevail) and so forth. Clearly, semantic chaos reigns around the term Efficiency. Webster's Third International Dictionary is of scant assistance when it defines EFFECTIVE to be that which is "able to accomplish a purpose" and EFFICIENCY as "suitability for a task or purpose", i.e., essentially the same.

It may be deduced from the ideas associated with all these terms that none by itself would fully cover the idea of business's contribution to SOCIAL WELFARE, including therein not only the idea of the attainment of the initial aims ("efficacy" for many), but also their achievement at the lowest possible cost or effort (what others call "efficiency"), with year-on-year improvements ("advancement" or "development") or even with employee and stakeholder conformity with or acceptance of what is obtained (usually termed "Effectiveness" in political science literature). What concept might encompass at least these four component principles of desirable business behaviour? The English and French term "performance", for instance, would appear to represent a more global vision of the results of business endeavour, but there is no true equivalent in other languages, such as Spanish.

Given the obvious need for a concept that would express the ideas of Efficiency, Efficacy, Results and so on, from as global a perspective as possible (integrating economic and social aspects in the broadest possible sense, in keeping with the term "social welfare"), perhaps the most viable solution consists in redefining some of these concepts. EFFICIENCY, for instance, would not be reduced to the almost dangerously narrow "ends reached/means deployed" ratio, but expanded to include most of the meaning of the other terms described above. If the above question is to be answered with any rigour, company complexities must be taken into account in all their

dimensions, an undertaking which in principle is simply a matter of adding versus subtracting perspectives until an integrated presentation of the concept is attained.

The first operation would consist in re-labelling the "ends reached/means deployed" ratio, which has been termed "efficiency", to release this term from the confines of its current content. What might this ratio, which signifies achievement of a result pursued at low cost, effort, or in other words low ENERGY CONSUMPTION, be called? The term ECOLOGICAL might prove to be suitable, inasmuch as the intention is to minimize such consumption. Albeit provisionally, the adjective "ecological" might be adopted to designate business behaviour exhibiting a suitable Input/Output ratio. This, in short, would represent the classic Output/Input ratio as the essential result of any company's or even any social system's transforming action.

Once the concept Efficiency is freed of the narrowness of the above ratio, a more complex, operational and at the same time quantitative definition of Business Efficiency (BE) might be advanced. Such an endeavour must be preceded by a brief introduction to an eminently axiological approach to the business system (Parra-Luna, 2001)., again in keeping with the "social welfare" concept. Table … lists the different stakeholders comprising the complex world of business relationships. The Reference Pattern of Values, in turn, is given in Table 1 of the last quoted work which provides an overview of the powerful interests that shape business activity and its functional dependence on such stakeholders, all of whom expect to obtain something from the company: salaries, dividends, products, services or taxes, at times as keenly as if such items were as essential as the very air they breathe. Like it or not, the central role of private enterprise as the mainstay of modern society cannot be denied; nor can the dependence of social structures as a whole on private profit be ignored, even if viewed from more critical and countercultural perspectives.

Taking these conceptual grounds as a point of departure, the initial question would have to be re-formulated in a more general and concrete manner: When is a company efficient? Initially, as argued above, when it is simultaneously "Ecological", "Efficacious", "Effective" and "Incremental". And it must be all these things with respect to relevant competitors, for nothing can be said to be good/bad, tall/short, ugly/beautiful and so on unless in comparison to some reference. A company may be highly ecological, efficacious, effective and incremental, but the least ecological, efficacious, effective and incremental of all companies in the same industry and of comparable size. The definition of the new concept calls, then, for the introduction of at least one more dimension: INTERNAL/EXTERNAL that compares company results to those of its (relevant) competitors.

Although this information cannot always be readily gathered, it is becoming increasingly more accessible on the Internet where many or most of the data needed for such assessments can be obtained.

The conceptual model for Business Efficiency (BE) would, therefore, be defined by the six propositions set out in Table 1.

A company is efficient if and only if it is ECOLOGICAL (attains a desirable Input/Output ratio).

A company is efficient if and only if it is EFFICACIOUS (obtains what it plans to obtain).

A company is efficient if and only if it is EFFECTIVE (its results are accepted by its stakeholders).

A company is efficient if and only if it is INCREMENTAL (its results are an improvement over the preceding period, i.e., the positive factors grow and the negative factors decline).

A company is efficient if and only if it is PROFITABLE (earns suitable financial profits).

A company is efficient if and only if it is ADAPTED (it is at least as ecological in its basic ratio between "Outputs" and "Inputs" as its relevant competitors, on average).

Table 1. Business Efficiency: requirements

All of the foregoing is based on the assumption that the set of indicators used validly operationalizes the theoretical Reference Pattern of Values and Company Stakeholder models. Otherwise, the utility of the approach would have to be challenged or the approach redefined.

The Business Efficiency Index would, then, be formulated from the following indices:

1.   ECOLOGICAL DIMENSION (T)

This is the ratio between OUTPUTS (Y) and INPUTS (X).

Therefore, T=Y/X,

where "Y" is the average of the percentage improvements obtained in the "Output" indicators and "X" the percentage improvement in the "Input" indicator, both with respect to the preceding period.

2. "EFFICACY" DIMENSION (E)

This is the ratio between FORECASTS and ACHIEVEMENTS

Therefore,

E=Ta._/Tf

where "Ta" is the actual, "Tf" the forecast ecological dimension and "_" a coefficient of imponderability.

3. "EFFECTIVENESS" DIMENSION (Ef)

This is the ratio between SUBJECTIVE and OBJECTIVE

Therefore,

Ef=Y(S)/Y(O)

where Y(S) are the outputs as perceived by stakeholders and

Y(O) the Outputs actually attained.

4. "INCREMENTAL" DIMENSION (I)

This is the ratio between PRESENT and PAST

I=(I1+I2+ … +In/n

where I1, I2 and so on are "Output" indicators.

5. "ADAPTATION" DIMENSION (A)

This is the ratio between the COMPANY and its COMPETITORS

Therefore,

A=Ta/Tε

where Ta is the company's ecological dimension and Tε the ecological dimension

corresponding to its relevant competitors.

1. "PROFITABILITY" DIMENSION (P)

This is the ratio between the company's gross profits (CGP) and the average gross profit (εGP) earned by its relevant competitors.

Therefore,

$P=CGP/\varepsilon GP$

where CGP is the company's gross profit and εGP is the mean

gross profit earned by its relevant competitors.

With these six dimensions, two pre-indices of efficiency can be established: organizational (OEI) and business (BEI). The former encompasses all the dimensions applicable to any sort of organization, business or otherwise. The latter is specific and corresponds to the economic nature of business endeavour.

The organizational efficiency index (OEI) would be:

OEI=(T+E+Ef+I+A)/5

While the Business Efficiency Index (BEI) would constitute the integration o the two[1] indices:

BEI=(EO+P)/2

The averages calculated are arithmetically correct inasmuch as the values found for all the resulting expressions hover around "1". In all cases, results > 1 indicate "high efficiency", whereas results < 1 mean "low efficiency", which may be interpreted for each dimension examined in terms of the respective deviation from "1".

The data in the sample Corporate Balanced Scoreboard above can be substituted into these equations to clarify the content of the concept and illustrate its simplicity.

The only difficulty in calculating these indices in the real world lies in the availability of the quantitative information required, which may not be immediate, particularly as regards the data on competitors. But this is one of the challenges that the information society poses to modern companies.

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[1] el castallano dice "ambos índices" – no sé si es evidente a cuáles se está refiriendo

A PRACTICAL EXAMPLE USING SAMPLE CORPORATE BALANCED SCOREBOARD DATA

"Business Efficiency" can be calculated by substituting the data given in Table 2, plus the information gathered via surveys and facts on the competition, into the above expression.

Table 2: A SIMPLIFIED CORPORATE BALANCED SCOREBOARD

An Axiological Concept of Organizational Efficiency

In this table de numbers of the columns mean:

INDICATOR	SIGN	P.1	F.I., %	P.2	A.I., %	DEV.	WEIGHT	WTED. DEV.	Im.I.	DEPT
(1) OUTPUT	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Absenteeism, days	-O	215	5	217	-0.9	-5.09	5	-29.5	0.99	H.R.
Opinion ab. Health	+S	8	5	11	37.5	32.5	1	32.5	1.37	H.R.
Productivity	+O	120	6	125	4.2	-1.8	9	-16.5	1.04	G
Opinion ab. Income	+S	7.7	5	10	29.9	24.9	1	24.9	1.3	H.R.
Alloc. for reserves	+O	20	5	21	5	0	4	0	1.05	G
Opinion ab. Security	+S	6	5	5	-16.7	-21.7	10	-216.7	0.83	G
Informative meetings	+O	12	0	15	25	25	1	25	1.25	H.R.
Opinion ab. Freedom	+S	7	5	7	0	-5	6	-30	1	H.R.
Staff w/ univ. degree	+O	25	10	35	40	30	2	60	1.4	H.R.
Opinion ab. Knowledge	+S	8	10	8	0	-10	8	-80	1	G
Profit sharing	+O	37	5	38	2.7	-2.3	7	-16.1	1.03	H.R.
Opinion ab. Equity	+S	6	10	6	0	-10	6	-60	1	H.R.
Waste generated	-O	15	5	10	33.3	28.3	2	56.6	1.5	P
Opinion ab. pollut.	+S	7	5	7	0	-5	2	-10	1	P
Employee suggestions	+O	300	5	320	6.7	1.7	7	11.7	1.07	H.R.
Social-wrkplce climate	+S	6	10	6	0	-10	8	-80	1	H.R.
Customer complaints	-O	38	5	30	21.1	16.1	1	16.1	1.27	C
Opinion ab. Prestige	+S	6	4	5	-16.7	-20.7	10	-207	0.83	H.R.
Headcount	+O	620	3	600	-3.2	-6.2	1	-6.2	0.97	H.R.
Opinion ab. Power	+S	7	5	7	0	-5	1	-5	1	G
Total			113		167.8	54.8	92	-529.9	21.90	
Average			**5.7**		**8.4**	2.7	4.6	-26.5	1.10	
INPUT										
G.1		150	5	145	3.33	-1.67			1.03	G
G.2	-	80	2	85	-6.25	-8.25			0.94	C
G.3	-	70	-2	80	-14.2	-12.2			0.87	P
G.4	-	55	1	56	-1.8	-2.8			0.98	A
G.5	-	62	3	64	-3.22	-6.22			0.96	H.R.
Total		417	9	430	-22.1	-31.1			4.78	
Average		83.4	**1.8**	86	**-4.4**	-6.2			0.96	

2. Signs "+" o "–" according to the desirability of the indicator, and "O" means "Objective" and "S" "subjective".

3. Forecast output in absolute figures.

4. Forecast percentage of improvement

5. Actual output in absolute figures

6. Actual percentage of improvement

7. Percentage of deviation produced

8.Weigh or relative importance of indicators

9. Weighed deviation

10.Improvement index=(3)/(5) or (5)/(3) according to the desirability of indicators

11.Department responsible

The overall results of this CBS, based on the hypothetical data, were as follows:

1.   The forecast improvement in percentage for all the company OUTPUTS was 5.7 (column 4).

2.   The actual improvement, however, was 8.4 (column 6), for a favourable overall deviation of 2.7% (column 7).

3.   The forecast improvement in percentage for all the company INPUTS was 1.8 (savings were planned) (column 4 under Inputs).

4.   Actually, however, improvement in this regard was negative (the -4.4% in column 6 under Inputs): in other words, the company spent more than planned: 430 million instead of the 417 budgeted, FOR A NEGATIVE DEVIATION (-6.2).

5.   The total percentages (columns 4 and 5) can be used to calculate a first estimate of company efficacy[2] by comparing the following ratios:

a) Forecast efficacy(Tf)=(100+5.7)/(100-1.8)=105.7/98.2=1.08

b) Actual efficacy(Ta)=(100+8.4)/(100+4.4)=108.4/104.4=1.04.

In other words, company forecasts called for positive "transformation" at a rate of 8% (1.08) but the rate actually attained was only 4% (1.04).

6.   After the results are weighted with the figures in column 8, however, the result is negative (-26.5), meaning that positive deviations were attained in indicators with scant relative weight, while the results were negative for important indicators with weights of 8, 9 or 10. The deduction is that management neglected matters of greater relevance to attend to questions of minor importance.

7.   Column 10, which relates columns 3 and 5, again shows, with a total index of 1.10, that unweighted results were 10% higher, not than the forecast, but than the previous period. This column gives the degree of dynamic (=over time) improvement or regression.

8.   Under Inputs, the same column denotes that the result of having incurred greater expense than planned was a negative deviation of 96-100=-4%.

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[2] = nota 3

These results can be subdivided by department or area of responsibility, although this is not shown in the above illustration, which, as noted, is limited to just 20 indicators. Results can also be expressed graphically to facilitate evaluation.

The following supplementary information (also hypothetical) is provided:

a)   Company profitability (gross profit over turnover)= 16%.

b)   Competitor profitability (average gross profit over turnover)= 15%.

c)   Average value of "T" for competitors= 0.85.

With this information we can now undertake the calculus of the dimensions involved:

Actual ecological index (Ta)=Y/X=(100+8.4)/(100+4.4)=108.4/104.4=1.04

Where "Y" is Outputs, "X" Inputs and 8.4 and 4.4 the respective average percentage improvements. These results mean that the company obtained a value of 104 from inputs worth 100, whose transformation yielded a profitability of 4% in terms of energy.

Efficacy index (E)=Ta/Tf=1.04/1.08=0.96

Where "Tf" is the forecast ecological index (100-5.7)/(100-1.8)=105.7/98.2=1.08.This result relates forecasts to actual achievements, for a 4% loss, although here the reference is the budget.

Effectiveness index (Ef)=ImI(S)/ImI(O)=10.33/11.89=0.89

Where ImI(S) is the sum of the Improvement Indices (column 10) for the subjective indicators (S) and ImI(O) the sum of the Improvement Indices (column 10) for the objective indicators (O).

Be it said here that ImI(O) represents the true Outputs based on statistical facts, whereas ImI(S) represents stakeholder opinion of the level reached. The results show that the perception of overall improvement is 10.33/10=1.03, whereas the actual overall improvement was substantially higher, 11.59/10=1.16 This is an indication of company ineffectuality in explaining its actual results to its stakeholders. Since an Effectiveness Index > 1 would signify "manipulation" and < 1 "lack of information", the obvious lack of information attributable to the company in this case reveals a need to revise its communication procedures.

Increment Index (I)=(I1+I2+ … +In)/n=(0.99+1.37+.......+1)/20=1.10

Here the succession of indices is taken from column 10 and the result means that achievement in the most recent period in terms of the 20 indicators taken as a whole was 10% better than in the preceding[3] period. Inasmuch as the improvement indices (ImI) are obtained from the ratio between P1 and P2 (columns 3 and 5), this result denotes net positive "growth" in company activities overall.

Adaptation Index (A)=Ta/T =1.04/0.85=1.22

Here 0.85 is the value of Ta for all the relevant competitors, obtained by benchmarking.

This outcome means that the results obtained by the company were 22% better, as measured by the 20 CBS indicators as a whole, than the figures recorded for its competitors.

Profitability Index (P)=CGP/GP = 16/15=1.07

Here 16 and 15 are the gross profits obtained from company books and through benchmarking, respectively.

This result means that the company was 7% more profitable than its competitors.

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[3] "antepenúltimo" en castellano

Consequently, the Organizational and Business Efficiency Indices (OEI and BEI, respectively) are:

OEI=(T+E+Ef+I+A)/5=(1.04+0.96+0,89+1.10+1,22)/5=1.04

What this means is that, viewed as a pure, non-financial organization, the company was 4% more efficient than other organizations engaging in the same business.

Finally, the total Business Efficiency Index (BEI) comes to:

BEI=(OEI+P)/2=(1.04+1.07)/2=1.05

This overall result is interpreted to mean that the company performed 5% better than the industry average in all the economic and social aspects considered, taken as a whole.

Once again, the foregoing figures are all hypothetical and serve no other purpose than to provide material for the present practical exercise.

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