

## **Accounting Approach of Sustainable Performance in the Overall Context of Sustainable Development**

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### **Abstract:**

*The intricate relation of sustainability within the actual global context preserves a main role in the development of the extremely complex relationships and their interconnection. Unfortunately, we are still tributary to a quantity vision and, of course, a linear perspective, which, in any case, creates a normal disruption between the realities and the results of the evaluation, at so intimate an extent, which is enough to be invisible at first only to create sufficient irregularities within the final perception at the management level.*

*Mainly for this reason, in the near past, the necessity of the quality approach emerged as thoroughly correlative, yet only under the pressure of the non linear factors such as the as environmental conditions along with the social and financial crisis.*

*As the sustainable development is highly argued upon – which is incredible, primarily pertaining to the social dimension - the quality approach preserves the information flows within the limits imposed by the economic extent via the environmental and social precincts.*

*The interest for the sustainable approach creates, in addition, the real interest for the accounting performance, involving the report, which will act as tightly related to quite a significant number of factors such as the climate exchange, the environmental degradation, the depletion of the resources as well as the recognition of the more increasing role of global corporations – only to mention the first rate ones, which are intimately connected with the social and, implicitly, the economic changes.*

We started our endeavour as consistently considering the perpetual “failure“ of a linear thinking to accurately “tune” with the real life, by way of creating an operational frame of the

basic relationship between individuals, their technical environment and, of course, the social border, which, by the way, stands for the cornerstone of human existence on Earth.

Taking into consideration the fact that using science and his technology, man has eventually had a tremendous success against nature, we can easily notice the frequently great imbalances of human kind on Earth, so vividly represented into the actual crisis. Moreover, crisis itself is a quite very intricate “entity” with exceedingly extended and worldwide manifested consequences.

The “hilarious” consumerist perspective is underlined by the opposite positioning of the poverty concept versus welfare.

In that respect, welfare stands for the possibility of having relatively everything at your disposal, no matter the costs involved, however poverty does actually escape a thorough explanation.

Poverty briefly represents the starting point for a tremendous race within no clearly-cut limitations, with having no compunctions, and without any sort of deference for the living environment whatsoever.

Poverty may yet be paradoxically considered as a sheer border or landmark which limits the very rich self-centeredness thinking from the much simpler way of living of the vast majority of people. Surprisingly poetic, isn't it?

What we have not yet considered is the whole range of various conditions which individuals can benefit in their embarking upon the race for prosperity and in the same time the obvious random effect of extant opportunities on each and every actor, and of course latter's actual undertaking.

Meanwhile, there is no uttered word or set-phrase from our economic past to encompass such a large number of factors as the climate exchange, the environmental degradation, the depletion of resources, and the list can go on.

The immense complexity of real life underlines the necessity of approaching a brand-new perspective as regards the current relevant evaluation degrees or no less than the immeasurable degree of deflecting these evaluations on various human area of activity, for a better understanding of the complex and very dynamic relationship between man, current technology and science, the social circle and natural environment. This relationship does actually give proper credit to considering a financial report grounded on sustainable development and quite even more.

In brief, a science of large complexity addresses an atypical direction of exploring reality, with also considering the quantity approach and of course the conventional accounting patterns.

From the very beginning, we have to separate the two main flows of the system as regards the time limit, i.e. the strategy of using the mix technology and product on short terms as well as on longer terms, keeping in view the system via all extant entities for the next development streams.

From our point of view, the large picture of the complex phenomena, interconnected in their dynamics, which is self-generative and perpetually evolving, represents a different approach in the attempt to mixing human and natural environments, as man has lately created his own environment quite far from the natural one and using the latter simply for consumption.

Without it we simply cannot discuss upon sustainability.<sup>1</sup>

Reporting the financial performance is by far limited in regard of the performances which the market has developed, that involving a further higher necessity of an additional non-financial report, and the instrument to be used is TBL – *Triple Bottom Line* as it pursuits the performance in economic, technical and environmental coverage areas. That prepares all actors for a more effective approach of the opportunities and requirements on the market.<sup>2</sup>

Far from an elegant re-conversion, we can easily make out a powerful stream of query against the sustainable approach of development, accordingly the same as strong as such concepts as accounting and sustainable performance in the same interest area. The conservatism can commit to a larger scale of social problems, with all their cultural charge, as well to the more and more new environmental issues, but separately, without any connection to the economic approach. That involves considering several interdisciplinary problems without the regular fracture of limitation to only singular discipline.

The real limitation of the sustainable approach in economics has only one clear-cut border i.e. uncertainty.

We consider sustainable performance as a powerful ideological instrument, as it disperses from daily business to extreme results and leads to financial analysis (in terms of efficiency) of the profit-cost report, using that way the sustainability evaluation models to explain the more requested participation in protecting the environment.

A number of factors maintain the interest for the sustainable development (the climate exchange, the environmental degradation, the depletion of the resources). What we cannot immediately see is the more increasing role of the global corporations as main factors in social, and implicitly economic changes.

These problems regarding sustainability will affect the investment value of a company with a very large degree of risk regarding the future products and accomplishments.

As far as the correlation is made between the above mentioned criteria (economic, social and environmental) the real amount of information will progressively increase, which in terms of an econometric approach will support the new request for a young model to engross reality, a model which can sustain the more powerful challenges in terms of systems logics, able to preserve and compel a quantity, a quality and a correlative processing of data, due to the fact that the environment has a human veneer through science and technology applied by the

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social dimension. We can simply describe the approach as a triple or, more realistically, a multiple bottom line (MBL).

As the future compel to explain the act of evaluation through the more necessary (officially or non-officially) obligations regarding the protection of nature – which is slightly quantified nowadays – we consider their report within the financial statements as compulsory, for the very performance of the entity is in correlation with the time dimension and the limitation of resources (space boundaries).

We can imagine the support for the environmental performance as the best representation of the financial perspective of companies in their existence in this environment, as the technical, scientific and social dimensions of the environment are involved in a permanent shifting process, and the natural trait being necessarily slowed down to the very benefit of future generations. Although the use of complex analytic models or structural ones provides a larger understanding of economic laws, the classic approach is limited in dynamics, and is largely demonstrated as inefficient in crisis, virtually without any time validating forecast.

Up so far, using the more complex models within the range of the environmental approach is the only way by which we can see how to prevail in this area of expertise, giving a good start for more and more sustainable predictions for all new sustainable policies.

We can start calculating the sustainability of a complex system pointing at first the research on cycles and commutative diagrams.<sup>3</sup>

The second step consists in addressing different successive levels, reaffirmed at certain dimensions, practically building new and self-adjusted stable forms which apparently do not abide by any degree of regulation.

The initial structure will base on a feedback scheme made of a source, a sensor and a decision with a portfolio of possible relationships among them, creating in fact a very simple but effective management diagram in terms of sustainable performance.

That can be developed in eight different types of feedback adjustments used for this diagram such as follows:

1. the adjustment of needs (sensor vs. decision and source, decision vs. source)
2. the sensitive adjustment (source vs. sensor and decision, decision vs. sensor)
3. the sources adjustment (sensor vs. source, decision vs. source and sensor)
4. the consumptions adjustment  
(source vs. sensor, sensor vs. decision, decision vs. source)
5. the efficiency adjustment  
(source vs. decision, decision vs. sensor, sensor vs. source)
6. the auditing adjustment decision vs. source and sensor, source vs. sensor)

<sup>3</sup> Colceag, F., Caraiani, C., Dascalu, C., Lung, C.I., Guse, R.G. (2010) “*Conceptual modeling of sustainable performance related to social and environmental accounting*” The 5<sup>th</sup> conference of accounting and management information systems (AMIS 2010)”

7. the conformity adjustment ( sensor vs. source and decision, source vs. decision
8. the decisions adjustment  
(source vs. decision, source vs. sensor, sensor vs. decision).

We must have in mind the time factor, each behaviour having the possibility of self inhibition as self stimulation as well, and the management structural game giving the possibility of decision due to the structural lines described as adjustments between the three components.

As an interesting fact, the fractal type patterns generate very simple designs for cycles, basically involving three elements (as for example thinking at what we have already presented above I, S, M) with an infinite linear translation of information as:

I-S-M- I-S-M - I-S-M ... ,

translation type source-sensor-decision, which in terms of perspective offers a glimpse through cycles future, as the growth cycle will evolve as source-sensor-decision-source ... , and the de-growth one will manifest on a different path as source-decision-sensor-source-..., making us more aware of the possibility to generate different behaviours in order to modify the general entropy of the system.

Specific for command and control structures, we can start this model with considering the N as point zero, S as the headquarters for accumulation, with an intermediary role for E, so,

I-S and S-M,  
consequently,  
I-M

As we already mention, cycles behaviours can be self incentive as self inhibitive, both on growth or de-growth cycles. We can create in that extent polygonal commutative diagrams with both two start points and two headquarters for the accumulation of flows, always taking into consideration the individual and his behaviour, the entities, the working teams, the market growth, the human-imprinted side (social and economic) of environment as well as the natural one, in fractal evolution.<sup>4</sup>

In terms of results, that supposes right from the outset to dispose of a directory of energetic and material consumptions as well as the output into the natural world (source), the impact assessment of both the social and environmental settings, the input as well as the output (sensor) accordingly, and needless to say, data interpretation, this time from the dissimulated position of management (the decision-maker).

The accounting TBL concept is overwhelmed of many pressure points as the evaluation and accounting acknowledgment, being followed not only by the appreciation of direct results but also by the evaluation of the institutional development.

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<sup>4</sup> Caraiani, C., Lungu, C., Dascalu, C., Colceag, F., Guse, R.G., (2007), “Green accounting-a helping instrument in European harmonization of Environmental, Standards, Database Social Science Research Network(SSRN)” ISSN 1556-5068

Basically, the aggressive effect over the economic, social (human within the scientific and technical dimensions) and environmental systems is supported by both the ever growing consumption in uncontrolled growth which depletes the resources, as well as the blocking of economic growth. We consider the approach as valid only on the ecological and technological perspectives over the well known human, social and economic ones. The system involves a dynamic equilibrium between factors in order to have channels destined for an ever growing development as well as a braking capability in case of an uncontrolled growth.

The global approach of the TBL accounting report gives us another degree of risk generated by the cultural facet of the social dimension.

Conclusively, the sustainable approach of development will be underlined by TBL as the preservation in more complete forms of the natural potential of consumption for each inhabitant of the future Earth.

For example, considering the consumption potential as a function of the two types of resources (natural and technological), we can describe it as

$$P = P ( n, t )$$

P = the consumption potential

n = natural resources

t = the technological resources

Taking into consideration the time factor, the consumption potential is interconnected with the future production potential - consequently with the resources –and basically with elements as technological progress and natural resources. Yet again, in terms of consequence, the eventual sustainable growth will request a constant flow of resources, or a more effective substitution of natural resources with the production generated ones.

That means the profit oriented politics which exploits the satisfaction indicators of stakeholders will always partially solve the environmental matter, because of the disturbance within the fragile equilibrium of nature.

We simply cannot strictly analyze in financial terms - in order to concur to a sustainable development - the strategic point of view as well the creation of value, and companies must follow an equilibrium development.

With all overlaps between TBL and the financial report, the real difficulties reside in explaining the indicators of economic, environmental and social performances as well as indicators of financial value. In that extent, many sustainability indicators only regard the quality component as they simply cannot be expressed in a financial form.

We also consider the human factor as utterly important in order to develop a more efficient line of accounting approach of sustainability through what we deem to be the future of MBL, having in mind the highly relevance of the psychological insight within the basic relationship between the individual working effort and the social dimension.

A new extensive dimension is growing in significance as the psycho-social behaviours of working relationships and making decisions finally enter quite larger models, with generating

more and more intricate channels and diagrams. Moreover, it is considered that the behavioural sustainability is as an evolutionary dimension, that is highly adapted to the new element, and which in terms of time creates great gaps between the levels of development within different segments of evaluation. We can sustain that from the technological point of view, the mankind has consistently progressed during the last millennia, as not precisely parallel to the real behaviour system, in terms of quality.

There emerges the constantly strategic role of the human factor, which is quite difficult to be drawn in the calculation of MBL, yet considering the increasingly systemic approach of the human factor in the channel of production as well as the environmental and social responsible behaviour.

The focal conclusion is obvious. The ordinary instruments of the accounting reference, which have to prevail over risks and uncertainties, must be integrated into a much larger - i.e. internationally considered - scope, within a new corporative reference structure.

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