A Proposal Of Some Methods Of Value-Creation Measures: Towards A New Perspective

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Abstract

The economy and business literatures have been fundamentally enriched these last ten years by different studies and investigations which prove clearly the variety of value creation indicators. Traditional performance measurement systems have been criticized as being too narrowly focused on financial figures and functional level performance such that they often fail to capture organizational long-term business success (Sim and Koh, 2001). Today, with the new economy, the total value creation model is a serious attempt to take more inclusive measurements by considering ways of measuring intangible assets (Leduc, 2001).

However, managing the factors that influence corporate performance is one way management which adds value to the bottom line. Analysts and investors are interested longer in a framework of principles and criteria to measure and report value creation and maintenance (Drozd, 2004).

Rational value creation has been the main goal in all economic era and it is therefore the goal of any modern company, institution, region or nation too. With the same resources a company can create more or less value. Therefore, the key question of the new economy is how do we know whether value is created or destroyed, whether enough value is created and whether it is created efficiently? (Pulic, 2004). This article shows some new tools for measuring the value- creation efficiency of a company. Two different approaches namely the qualitative and the quantitative ones, will be presented. A discussion in the end, about the reliability of the measure methods, will surely enhance this investigation.

Keywords: Value-Creation Methods, Qualitative Approach, Quantitative Approach, New Economy.

Introduction

Today, global effort in management intended to help senior management, investors and other stakeholders make better strategic decisions using value measurement and reporting. Managing the factors that influence corporate performance can add value to the bottom line. Every investment analyst tries to look beyond the financial data for information about a company's potential. Analysts and investors should be interested in a framework of principles and criteria to measure and report value creation and maintenance (Drozd, 2004).

Likewise, a report elaborated by the American Institute of Certified Public Accountants (AICPA) recommends that companies should disclose leading, non-financial measures on key business processes. Researchers have to analyse the ability of non-financial factors to predict value creation (Laitinen, 2004). According to some research workers, business success depends on the use of strategically linked performance measures, which include both non-financial and financial performance measures (Sim and Koh, 2001).

Value and value creation

According to Frioui (2006), in any value, there is a "membership" which means the consciousness of the application conditions. Value is a conviction that arouses the "membership" of different parts with a view to making happen an ideal such as equity, trust, solidarity. Frioui (2006) suggests that the concept of performance is related directly to the concept of value creation. If any company wants to realize its performance, it must create value with a lasting and continuous way. Value can be divided into three parts; the first representing the tangible part and is composed of economic value. The second and the third are depicted by the intangible parts which are the institutional and the social value:

- The economic value is the creation of material wealth.
- The institutional value is the values that consolidate and develop the pride of belonging to the viable and liveable entity.
- The social value is the constitution of partnership with the environment. It is the development of relational network.

As we have looked and in accordance with many other research workers, we have noticed that value creation is related to two principal parts, tangible or financial value creation and intangible or non-financial value creation (low, 2000). Value creation is started being presented, fundamentally by the economic and financial dimension (Allaire and Firsiritou, 1993). But after that, researchers started their studies in order to reveal the other dimensions of value creation.

Intellectual capital, which is a dimension of intangible value, is widely recognized as the critical source of true and sustainable competitive advantage. Research workers, demonstrated that the management of intellectual capital has an impact on business performance. Knowledge is the basis of intellectual capital and is therefore at the heart of organizational capabilities (Bygdas and al., 2004).

The problematic of value creation measurement

The increasing importance of value creation is reflected in the growing number of methods. The review, illustrates that organizations measure value creation for different reasons. The key reasons are: to formulate and assess strategy; to influence people's behaviour; and to externally validate performance. In the field of performance measurement, there has been a strong focus on the creation of frameworks, indices and accounting guidelines to support the management of value creation. Someone illustrate the evolution of measurement approaches from static and regimented first generation measurement approaches towards more dynamic and open representations of how value is created in organizations (Sim and Koh, 2001).

In this way, our article will discuss the different methods of value creation measurements. As we will see after, many researchers have dealt with this subject differently. Some ones have proved the importance of the quantitative approach in the measurement of value creation, but others argued the utility of qualitative approach and its contribution to the performance.

The methods of value creation measurement

What is measurement?

The book of "encyclopédie" defined the verb "to measure" differently. It mentions: to measure is, to determine a quantity or a size, to determine the importance, to proportion, to determine with moderation, to determine parcimoniously. In summary, to measure is to look for the assessment that justify one behaviour. As we see, we can divulge that the problematic of measurement can be divided into different types of approaches. For this reason, the next paragraph will deal with this question.

The quantitative approach

The Economic Value Creation Index (VCI)
The quantitative approach supposes the calculation of an index or a coefficient. Allaire and Firsiritou (1993) demonstrated that value creation summed up in the economic value. According to these authors, the step supposes some calculations until the finding of the value creation index (VCI). The figure below will demonstrate methodologically the step:
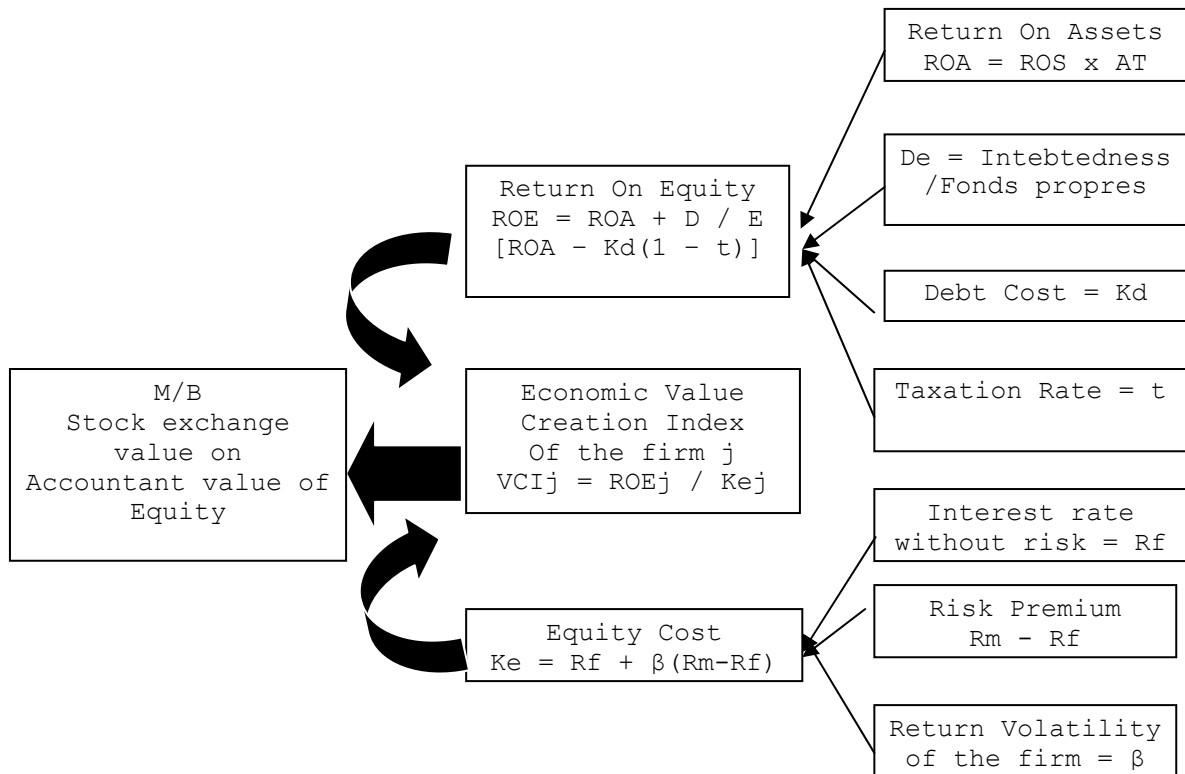
Figure 1: The quantitative measure of value creation

As we looked in this figure, the economic Value Creation Index is calculated starting from the combination and the addition of different coefficients and rates. This index is purely quantitative and gives managers a clear idea about the performance of the firm.

The VAIC Method
The works of Shiu (2006) and Rathbone (2006) have demonstrated other quantitative approach in value creation measurement. The method of Value Added Intellectual Coefficient (VAICTM) gives a new insight to measurements of value creation and monitors the value creation efficiency in companies using basic accounting figures.

According to these authors, the VAIC approach is based on five assumptions. Firstly, to find out the competence of a company in 'creating' or value added (VA) the difference between output and input should first be calculated.

$$OUT - IN = VA$$

Where OUT (output) includes the overall income from all products and services sold on market, IN (input) contains all expenses for operating the company, exclusive of labour expenses, which is not regarded as a cost. VA (value added) results from how current business and related resources, capital employed, human and structural, are used or employed

Then, it is necessary to determine how much new value has been created by one unit of investment capital employed, with the second step being

the calculation of the relation of value added and capital employed
(including physical and financial capital)

$$VA/CA = VACA$$

Where VACA is the Value Added Capital Coefficient. The third step is
to assess the relation between value added and human capital employed,
to indicate how much value added has been created by one financial
unit invested in employees.

$$VA/HC = VAHC$$

Where VAHC is the Value Added Human Capital Coefficient. structural
capital (SC) is obtained when human capital (HC) is deducted from
value added; with HC and SC being in reverse proportion. The fourth
step is to find the relation between VA and SC, indicating the share
of SC in created value.

$$SC/VA = STVA$$

Where STVA is the Value Added Structural Capital Coefficient. The
fifth step is to assess each resource that helps to create or produce
VA.

$$VAIC(TM) = VACA + VAHC + STVA$$

Where VAIC, the Value Added Intelligent Coefficient, indicates
corporate value creation efficiency. VAIC is defined as a composite
sum of three separate indicators:

(1) Capital employed efficiency (CEE): indicator of the VA efficiency
of capital employed.
(2) Human capital efficiency (HCE): indicator of the VA efficiency of
human capital.
(3) Structural capital efficiency (SCE): indicator of the VA
efficiency of structural capital.

$$VAIC = CEE + HCE + SCE$$

To conduct the analysis, three dependent variables of ROA, ATO and MB
were used as proxy measures respectively for profitability,
productivity, and market valuation (Firer & Williams, 2003). Their
definitions are:

(1) ROA: ratio of the net income divided by book value of total
assets;
(2) ATO: ratio of the total revenue to total book value of assets;
(3) MB: ratio of the total market capitalization (share price times
number of outstanding common shares) to book value of net assets.

This study uses correlation and linear multiple regression to analyze
the data. The three control variables were, size of firm (Size),
leverage and return on equity (ROE).They were given by:
(1) Size of the firm (Size): natural log of total market
capitalization.
(2) Leverage: total debt divided by book value of total assets.
(4) Return on Equity (ROE): ratio of the net income divided by book
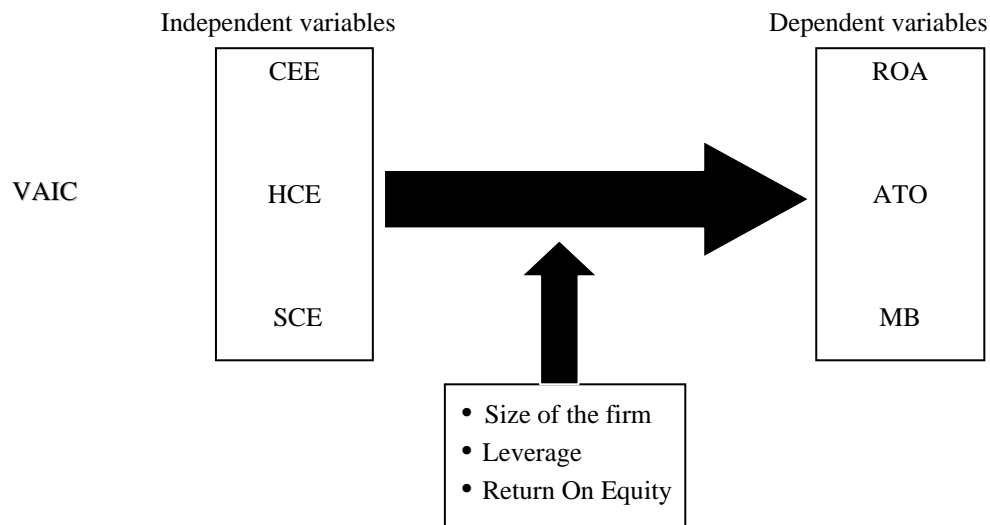value of total shareholders' equity.

This work can be depicted as:

Figure 2: the method of Value Added Intellectual Coefficient (Cokins, 2007)

This method suggests the calculation of a coefficient and the measure of the effect of some independent variables on some dependent variables. These two methods of measure mentioned below are purely quantitative. The review in this domain, have demonstrated in certain cases the utility of the qualitative approach. In some cases the qualitative is being quantified as we will see in the following section.

The qualitative approach

The rank of value
As we have seen previously, there is increasing recognition of the importance of intangible assets. There is also a pressing need for a set of widely accepted metrics by which corporate leaders and the investment community can account for the non-financial factors that profoundly affect value creation in the modern enterprise (Kalafut and Low, 2001).

Intangibles have always been a driver of corporate performance. Managers are increasingly adopting non-traditional methodologies of measurement. Research team developed a list of the some critical categories of non-financial performance that determine corporate value creation, like as: innovation, quality, customer relations, management capabilities, alliances, technology, brand value, employee relations, environmental and community issues.

In order to measure the value creation, the multiple indicators were standardized to a common scale, using weighted combinations, to reflect their proportionally different impact on value. At this point, components are weighted to create an overall score that accounts for the greatest amount of variation. (See the table 1 below):

Value driver category	Importance rank
Innovation	1 High
Management	2 High
Employee	3 High
Quality	4 High
Brand	7 Medium
Technology	8 Low
Customer	9 Low

Table 1: Rank of value driver category

We call this method, "quantifying the qualitative" because research workers started to put some principal indicators of value creation. These indicators are measured by a standard scale which shows the relative importance depending on the approval of each respondent.

The balanced scorecard
Robert Kaplan, of the Harvard Business School, and David Norton, the president of a Massachusetts consulting firm, developed the balanced scorecard (BSC) in the early 1990s. It was built around the premise that companies can no longer gain sustainable competitive advantage solely by developing tangible assets. To phrase it differently, the ability of a company to build its "intangible assets" or "intellectual capital" has become a critical success factor in creating and sustaining competitive advantage. According to Kaplan and Norton, the four perspectives of the BSC, as presented in Figure 3, will enable companies to track financial results and simultaneously monitor progress in building the capabilities that are necessary for acquiring the "intellectual capital" or "intangible assets" needed for future business growth and for providing keener competition (Sim and Koh, 2001; Bryant and al., 2004).
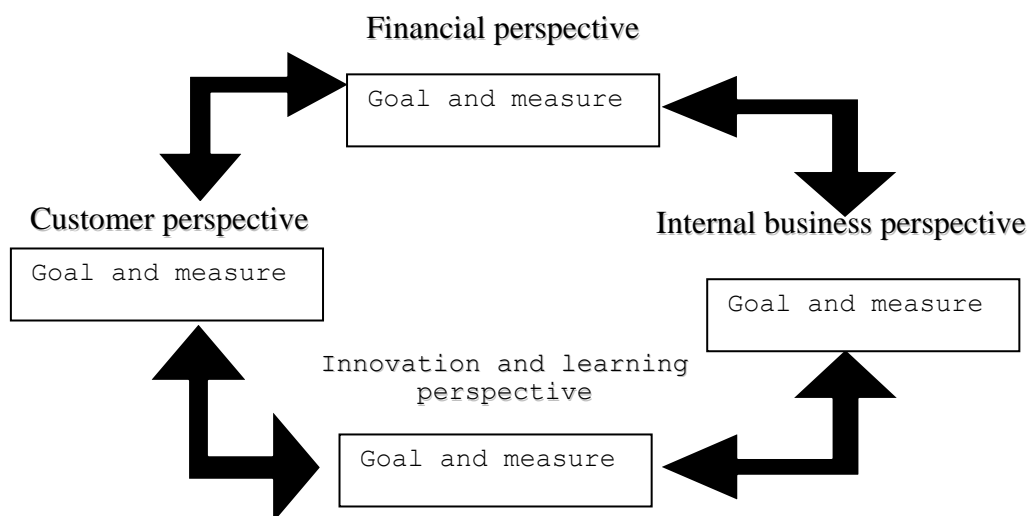
Financial perspective

Goal and measure

Customer perspective

Goal and measure

Internal business perspective

Goal and measure

Innovation and learning perspective

Goal and measure

Figure 3: The balanced ScoreCard.

Authors suggest the use of correlation analysis to test the expected relationships in the scorecards. Each criteria must be evaluated by respondent with a measure scale. The ideal is the goal and results have to be compared to it. Value creation supposes the existing of the inter correlation between the dimensions. This way is called a dependence function.

In the other side, some authors have tried to enhance this method by elaborating a map of correlation that must exit between indicators of value creation. The most important in this method is that the correlations between criteria are relative as we will see in the next section.

Benchmarking and value creation pathway map

In accordance with Marr (2003, 2004), benchmarking is generally recognized as a tool that enables a company to understand its current performance levels and set future targets. It is defined in accordance with some authors as the process of identifying, understanding, and adopting outstanding practices from organizations, including your own, anywhere in the world.

In this case, some researchers suggest the elaboration of the value creation pathway map. It is considered as the drawing of the ideal which have to be reached (as shown in the figure below). Every company must compare each situation to the ideal map and try continuously to carry out it. The thickness of each arrow demonstrates the importance of the relation that must exist.
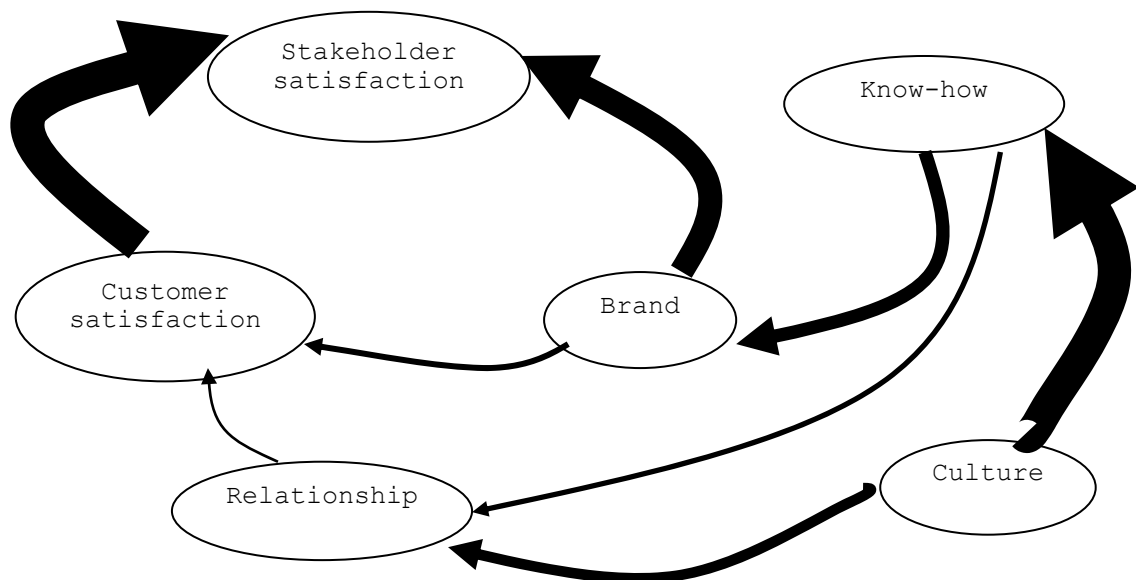

Figure 4: Value creation Pathway map

The pure qualitative method

In order to measure value creation, some researchers have been distinguished by elaborating a qualitative method. This one is elaborated by starting from a conversation with the respondent. In order to explain this, we have taken the works of Phanuel (2001).

Author has drawn up a banking creation value model which is shown in the figure below:
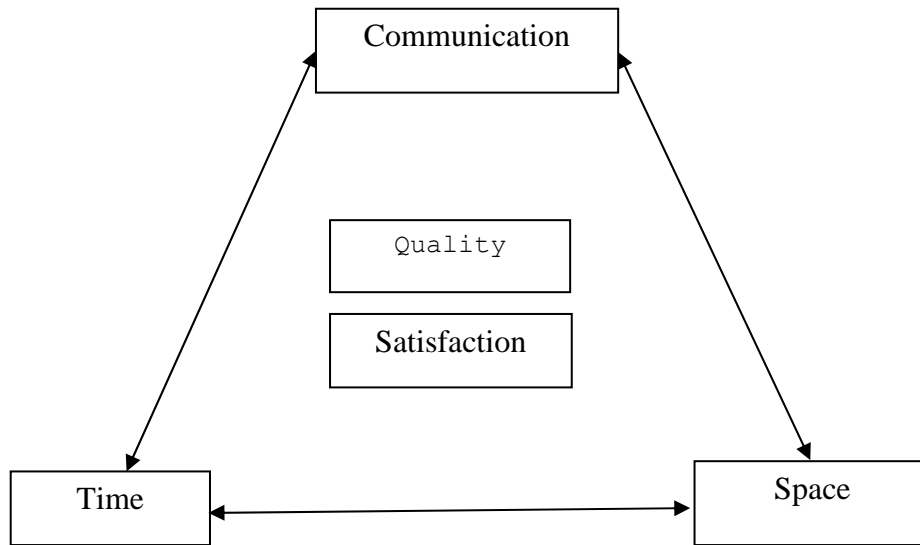

Figure 5: the banking creation value model.

During the conversation, respondent have to express freely on the subject. He has to deal with each variable separately. After that, he proceeds to treat variables two by two in the view of a disclosure of any relationship between variables. According to this method, value creation is possible when the respondent perceives the existence of these indicators (Communication, time and space)(Phanuel, 2001).

Summary and discussion

As we have seen during this article, we find a variety of methods that measure the value creation. Authors have demonstrated that measurement is not limited to only one. The propositions are varied. In one case, we found a quantitative and functional measure proposed by Allaire and Firsiritou (1993). This method is accurate and definite because of the type of data used, but it measures value creation only by the economic value. Its generation is depending on a variety of motors such as strategic and financial. In others cases, value creation is measured by the additive type. Scores of evaluation must be added in order to find a precious measure. These measures concern the financial and non-financial value creation (contrary to the previous one), but has a limit of the subjectivity as it depends on the appreciation of the respondents.

Pursuing our divulgation, we found also a dependence measure method as shown in the works of Kaplan and Norton. When measuring the value creation, research workers have to calculate a coefficient and a correlation between dimensions. The correlation and the test of the coefficient can be a strong measure of the value creation. We call this method dependence. This method depends on some data and some statistical tests in order to be generalized.

As we have seen, the last method is purely qualitative which is elaborated by the conversation. It is a measure by the interpretation,

it is a qualitative measure. Otherwise, qualitative methods remain subjective. The subjectivity is a limit because it depends on the appreciation of the respondents. Appreciation is very personal and does not reflect usually the exact measure. To recapitulate these says, we propose four type of value creation method (Functional, additive, dependence and qualitative by the interpretation).

Starting from this observation, many research workers discussed the reliability of the measures especially since the dimensions of the creation value are different (tangible vs intangible). The measure of the tangible stretched out to be quantitative but the measure of the intangible tended to be qualitative. Recently many research workers suggested two orientations in order to calculate a general value creation index. Either to quantify the qualitative (intangible) or to give back the qualitative quantitative (tangible). This work requires a hard effort in order to reach the objective. As a perspective, researchers have to look for the reliability of each method. Changing all over the world in management domain needs a continuous hard work so as to reach the main objective.

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