Firm strategy with the Balance Scorecard

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Abstract
The aim of this paper is to propose a new method for implementing the Balanced Scorecard (BSC) in environments of small and medium firms (SMEs). In doing so, we take into account two different streams of literature concerning the implementation of BSC and the characteristics of small and medium firms with reference to innovative performance measurement (management) systems. The implementation method we propose (light-BSC) from one side encompasses the critical success factors of BSC (as they have been highlighted in the available empirical literature) and from the other is compatible with SMEs' characteristics. At the end we show how such method might favour a reconciliation between strategy and budgeting.

Keywords: Performance measurement systems (Balanced Scorecard), customer orientation, financial and economic measures.

1 Introduction

Since the early nineties both the entrepreneurial and the academic world showed a growing interest in the topic of business performance measurement. This new interest is probably due to deep changes in global economy among which, *inter alia*, more intense competition, reduction of life cycle products, higher requirements by costumers. However this interest has concerned mainly large firms, while the attention devoted to small and medium firms (SMEs hereafter) is surely more limited[1]. In particular the Balanced Scorecard (BSC) which is surely the most widely known business performance measurement system was originally designed and conceived for large firms. The aim of this paper is to propose a BSC tailored on the necessities of small firms. It is certainly an aspect worth of interest even if largely neglected in the literature.
In the next section, after a quick description concerning the passage from traditional business performance systems to innovative ones, we introduce the concept of BSC and how it has evolved during the years, from a business measurement system to a strategic management one. In section 3 we will survey the empirical literature concerning the performance of firms adopting BSC, in order to identify critical factors (potentiality and limitations) of this instrument. In section 4 we propose the BSC for SMEs: it will be tailored on one side on the basis of critical factors previously identified and on the other side on the characteristics of SMEs. Section 5 concludes the paper.

[1] See, among others, Garengo *et al.* (2005), Hudson *et al* (2001) e Hudson Smith e Smith (2007).

2 From traditional business performance systems to BSC

As we saw in the previous section, since the early nineties there has been a growing interest in business performance measurement systems. The need to introduce new performance measurement systems is due to some drawbacks which affect the so called "traditional" measurement systems. Traditional performance measurement systems were mainly based on financial (economic) data coming from accounting systems (sales, costs, profits, cash flows, accounting ratios, productivity measures). The main shortcomings of traditional performance measures[2] concern, among others, their lagging metrics (usually accounting data are not updated and therefore their usefulness is limited), their emphasis on cost reduction, neglecting therefore other important aspects such as quality and in particular, customer satisfaction. Another important shortcoming concerns the limited relevance of traditional measurement systems in practice, since their emphasis is in financial measures, while other important factors of business success (improvement in product quality, shorter lead time, customer satisfaction, etc.) cannot easily be quantified in monetary terms.

Innovative business performance measures[3] are mainly based on non-financial measures such as operational measures which can be used by managers during their decision-making process. Furthermore they are much more customer oriented rather than profit oriented. Thirdly their emphasis is much more on the value creation[4] than on the cost reduction. Their orientation concerns more the long-term rather than the short-term, and their aim is not only to evaluate performance but also to enhance the firm's performance. Furthermore, they are also conceived to be used at the shop floor while traditional performance measures are mainly intended for middle and high management. Finally, "time" becomes an important performance measure and often the reduction of cycle time is seen an important metric to achieve other objectives such as reduction in time deliveries (and thus alignment with customer requests), reduction of production costs, increase in productivity and also in increasing in product quality.

Among the non traditional business performance measurement systems, the most influential one is the Balanced Scorecard framework (BSC)[5]. This framework was introduced and subsequently developed and enriched by Kaplan and Norton (Kaplan, Norton 1992, 1996a, 1996b, 2000, 2004a). These authors proposed a new framework which integrates financial and non financial measures. These measures are grouped in four different areas, in order to give managers a fast and a complete view of the most important and critical areas of business[6]. These areas, or 'perspectives' are the financial, the customer, the internal process, the learning and growth ones[7]. They are intended to answer four significant questions: 1) How do our customers see us (the customer perspective)? 2) How do we look to our shareholders (financial perspective)? 3) Can we continue to improve and create value (learning and growth perspective)? 4) What must we excel at (internal process perspective)?

As an example, financial indicators may range from traditional financial indicators (ROE, ROI, ROS, debt ratios, liquidity ratios)[8] to measures aimed at evaluating the value creation, such as EVA©.

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[2] Ghalayini and Noble (1996, pp. 64-67).

[3] See Ghalayini and Noble (1996, pp. 67-78) and De Toni and Tonchia (2001, pp. 47-48). Although there is some consensus about the difference between 'old' and 'new' performance measurement systems, however there does not exist a precise and unambiguous definition of performance measurement systems. For a recent survey and an attempt at identifying the key characteristics of non traditional performance systems, see Franco-Santos, *et al.* (2007).

[4] See Falasco and Guzzini (2009, ch. 1).

[5] Marr and Schiuma (2003).

[6] Kaplan and Norton (1992, p. 71).

[7] Originally, the "Internal process perspective" was called "Internal business perspective" and the "learning and growth perspective" was named "Innovation/learning perspective".

[8] Far from being outdated, these indicators are still important: in a period of financial crisis such as the present one characterized by a credit crunch, firms highly indebted experience problems in accessing capital markets, while the "more financially solid among them are now buffering the impact of the recession by consolidating their technological edge and diversifying their outlet market" (Banca D'Italia 2009, p. 8). According to a research conducted by the Italian rating society Eu-Ra (quoted by Longo 2009, p. 3), on the balance-sheet of 250,000 italian companies, 70% of them has

Subsequently Kaplan and Norton (1996a) introduced cause-and-effect relationships among the different areas (Fig. 1). In this way they are able to introduce strategic considerations into BSC since "strategy is a set of hypotheses about cause and effect"[9]:

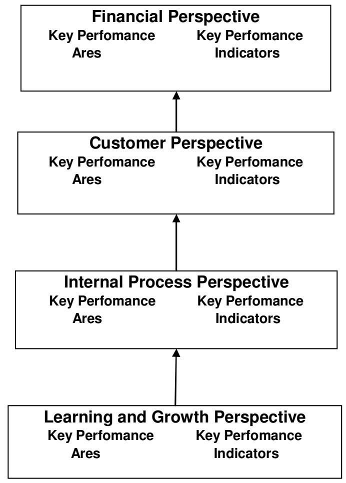

Fig.1. Cause and effect relationships in BSC.

Given these links, each area should be provided with a set of measures which can be classified in "lead" (drivers or causes) and "lag" measures (outcomes or effects).
Beginning from these cause-and-effect relationships the concept of "strategy map"[10] was further developed. A "strategy map" is a "visual representation of a company's critical objectives and the crucial relationships among them that drive organizational performance"[11]. It "describes the process of transforming intangible assets into tangible customer and financial outcomes"[12]. It represents, through a series of cause-and-effect relationships among the four areas how a company converts its resources into financial (and non-financial) outcomes. Furthermore it also shows what kind of resources (competencies, skills, technologies, company's culture) the firm needs in order to support value creating internal processes which are a prerequisite to meet customer requests and then financial outcomes. An example of strategy map is given in Figure 2.
In this evolution from a performance measurement system to a performance management one an important characteristic that the firm has to meet is to "be aligned"[13]. A company is aligned if all its human resources (from the top management to the shopfloor) operate following a common vision and if they are aware about the importance of their tasks in sustaining the strategy. Roughly speaking in order to have an aligned organisation is necessary to have an effective communication about the company's strategy from top to down (in order to stimulate in employees "intrinsic motivation"); subsequently it is necessary to create an "extrinsic motivation" by setting individual and team targets and by linking them to a system of incentives[14].

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a rating lower than BBB. Estimate on 2009 point out that the situation is still worsening (about 80% has a rating lower than BBB).
[9] Kaplan and Norton (1996b, p. 149).
[10] Kaplan and Norton (2000, 2001, 2004a).
[11] Kaplan and Norton (2000, p. 168).
[12] Kaplan and Norton (2001, p. 69).
[13] Kaplan and Norton (2004b, 2006).
[14] Kaplan and Norton (2004b, p. 62).

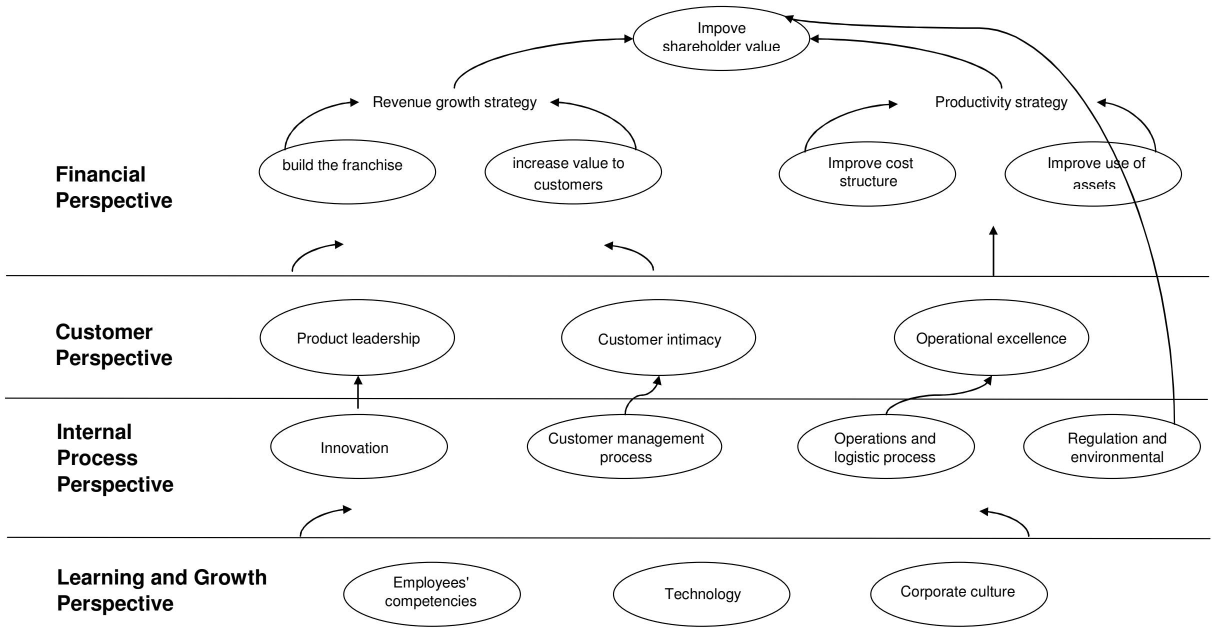

Fig. 2. Example of BSC with strategic themes (Source, Kaplan and Norton, 2000, pp. 168-169).

The evolution of the BSC is mirrored, according to Speckbacher *et al.* (2003) by its usage. In particular these authors recognize three different types of BSC usage:

Type I BSC: which is essentially a performance measurement system that considers financial and non-financial measures.
Type II BSC: which in addition describes firm's strategy through a set of hypothesis about cause-and-effect relationships among the different areas (strategy map).
Type III BSC: in this case BSC not only describes strategy; it is a fully-fledged strategic management system which implements the strategy in the company through communication, actions, plans and incentives (strategic alignment).

We must remember in concluding this rapid illustration on BSC, that it has been criticized by some authors. Without mentioning all of them, we recall the most important criticism.
The existence of cause-and-effect relationships among the four perspectives is questioned by some authors, according to whom there are more "interdependence links" than "one-way" relationships[15]. Furthermore in cause-and-effect relationships time dimension is an important variable, since there is a time lag between the two, but time is a dimension not explicitly contemplated in the BSC[16]. Moreover the picture presented in the BSC is not complete, since it does not consider all the stakeholders, but just few: for example supplier, institutional authorities, competition are not explicitly considered[17].
Another aspect concerns the fact that the link between BSC and "traditional" budget control is not clear[18]. Lastly, although BSC is widely used (i.e. about 60% of the Fortune 1000 company

[15] Moreover, between the four areas trade-offs may emerge.
[16] See Nørreklit (2000, section 2) and Otley (1999, p. 367). However for a rejoinder on the first two aspects, see Bukh and Malmi (2005).
[17] For example in the Swedish experience, many companies using BSC have added another perspective, the employee one (Olve, Sjöstrand, 2006, ch 2).
[18] See, e.g., Otley (1999). We will turn to this point in section 4.

experienced the Balanced Scorecard[19]) there are not uncontroversial and large scale empirical studies about the BCS application and its success[20]. With reference to this latter point we will briefly review the empirical literature on BSC in the next section. In particular we will try to detect the conditions under which the BSC implementation leads to positive performances and this will give us important information in order to design the BSC for small and medium firms.

3 Factors of success of BSC: a review of the literature.

As mentioned above, available evidence[21] about the role of BSC in influencing the company's performance is not conclusive.

For example Davis and Albright (2004) find that the branches of a US bank implementing BSC outperform the ones non implementing it. On the contrary Ittner *et al.* (2003) find negative relationships between the adoption of BSC and financial indicators.

An attempt to explain such a 'puzzle' may concern the use of BSC since, as we noted above, BSC can be implemented in various ways and/or levels[22].

With reference to this aspect, Braam and Nijssen (2004), analyzing a sample of 41 Dutch companies, find that if BSC is simply used as performance measurement system, its effect on firms' performance is even negative[23]. One reason of this result could be the following: the BSC could be used in this case mechanistically, without direct connections with the company's strategy. BSC could be, in this situation, as an "'end' rather than a 'means' to a goal […] When designed and used mechanistically, BSC use may result in overbureaucratization and focus on details rather than on the overall picture and strategic direction"[24]. On the contrary, if BSC is used as a strategic management system which implements the company's strategy (*alignment*), then its effects on business performance is positive[25]. This result is consistent with Speckbacher *et al.* (2003, p. 381)[26] who find that for companies implementing more complete BSC (e.g. Type III) the perceived benefits and satisfaction for this managerial tool are higher than for companies implementing less complete BSC. Yu *et al.* (2008) find the importance of strategy-linked BSC and of cause and effect relationships in determining the effectiveness of a BSC. With strategy-linked BSC and with causal relationships, the BSC becomes a strategy implementation instrument which helps company to communicate its strategy through all its levels. The importance of cause and effect relationships among measures with regard to companies' benefits is also confirmed by Bedford *et al.* (2008)[27].

Regarding the role of BSC in communicating and implementing strategy through the organization (alignment) Malina and Selto (2001)[28] find that managers react positively to the introduction of a BSC by realigning their efforts and activities. In particular they find this when measures are reliable, they are perceived as good guides for improvement, they are aligned with strategy, they are causally linked among them (and are linked to a reward system), and when benchmarks are perceived as appropriate.

Quite contrasting are the results of Bedford *et al.* (2008), according to whom there is no effect of the level of implementation of BSC (e.g. business unit, plant, individual). They also find no relevant

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[19] Silk (1998).

[20] Marr, Schiuma (2003, p. 684).

[21] We point out that this kind of literature concerns mainly large firms, while our focus is on small firms. We believe, however, that many aspects we are going to describe pertain to the BSC *per se* and therefore they should be applied also to small organizations.

[22] See the taxonomy proposed of Speckbacher *et al*. (2003) above described.

[23] This finding allows them to explain why some studies find negative relationships between the adoption of BSC and financial indicators.

[24] Braam and Nijssen (2004, p. 344).

[25] The distinction between BSC as a business performance system and as strategic management system mirrors, loosely Type I and Type II or Type III in Speckbacher *et al*. (2003).

[26] Speckbacher *et al.* (2003) results are based on a sample of 42 companies belonging to German-speaking countries.

[27] Bedford *et al.* (2008) analysis is based on a sample of 92 Australian firms.

[28] Their study concerns 9 of 31 divisions of a large international manufacturing company.

positive effects of linking reward systems to non-financial measures, unless the BSC incorporates cause and effects relationships[29].

More recently, De Geuser *et al.* (2009) in a study based on a sample of 24 European companies[30] find that BSC contribute positively to firm's performance. Furthermore they are also interested in finding how a BSC creates such performance. In other words they want to detect the sources of positive performance. With reference to this latter issue they find that BSC: 1) plays an important role in translating strategies in objectives and plans; 2) plays a positive role in affecting managerial practices continuously by monitoring and controlling; 3) plays a positive role in the alignment process of resources towards strategic objectives[31]. However they also find that the participation of everyone to the BSC process implementation is not statistically significant[32]: an explanation of such result may be simply that the firms have not yet completely implemented a fully fledged BSC (Type III)[33].

Another important aspect which is highlighted in some studies concern the fact that the BSC's implementation process can be a trigger of conflicts in the organization. With reference to this latter point, according to Neely and Bourne (2000) the main reasons for an implementation failure of BSC are related to two different kinds of reasons. The first one concerns the initial step, when the BSC is designed: identification of strategic objectives, the definition of the strategy map, selection of the key performance indicators (performance measurement). In these phases the triggers for failures concern poorly designed strategy-maps and/or performance measures not in line with the company's strategy. The second set of reasons for failures in the implementation concern the implementation process itself. Even if the strategy map is properly designed and the key performance indicators are clearly defined and aligned with strategies, some difficulties may arise as well. In particular Neely and Bourne (2000, pp. 5-6) highlight three main reasons.

A first set of reasons concerns the lack of infrastructures in the firm and in particular the management of data. In many companies there is a plurality of databases which often do not communicate among themselves. Therefore the management in order to have the availability of the required data has to waste a lot of time and energy. Linked to this there is another one reason, the so called "loss of focus". Because of the need of effort, of resources, and because the implementation process requires a lot of time there is the risk that the management decides to put its attention and priorities over other issues. Therefore the implementation process risks to be stranded.

Finally there is a set of 'political' reasons which, probably, are the most important ones. If measurements are used as a "big stick" towards managers and/or employees then a quite natural reaction of this could be a sabotage of the measurement system. Employees could try to meet the targets required even to the detriment of their real performance[34]. For this reason it would be important that the implementation process involves a proper use of the measurement system.

Also other studies highlight the importance and the risks of these 'political' aspects. Malina and Selto (2001) quoted above, for example, report that BSC can be the source of infra-organizational tensions when measures are not reliable (subjective) and when the implementation process follows a strictly hierarchical top-down procedure without any participation of the first-level managers[35]. Manville (2007) in a case study concerning the introduction of BSC (in a not-for-profit small enterprise) reports some preoccupations of CEO's organization which concern the same line of argumentation: "the BSC should not become a "monster that we all are worshipping"". He [the CEO] added that the BSC should send a strong message that it is an empowering tool rather it saying "we do not trust you and we are going to measure everything and make sure that you do

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[29] Banker *et al* (2000) find an improvement in non financial measures when they are used as a reward system. Their study is based on 18 US hotels belonging to an international hotel.

[30] These companies are based in different European areas: Switzerland, UK, Germany, Austria, France and Netherlands.

[31] De Geuser *et al* (2009, p. 114).

[32] This latter result is 'similar' with Bedford *et al* (2008) quoted above.

[33] This is the explanation given by the authors themselves. See De Geuser *et al* (2009, p. 114).

[34] According to Neely and Bourne (2000, p. 5) "people begin to play the number game".

[35] This resistance is sometimes labelled as "Non Invented Here" phenomenon. See Kasurinen (2002, p. 337).

it’”[36]. The same arguments were also noted by Braam and Nijssen (2004, p. 345): “People may feel threatened by the close monitoring system, leading to feelings of distrust towards company top management. To overcome these feelings, top management should engage in trust building behaviours including taking the lead and endorsing openness, transparency and benevolence in the favour of overall company effectiveness and efficiency.” Always on these lines of reasoning, other kinds of tensions between top management and divisional management may arise because of the raters’ (top management) bias to consider the effectiveness of strategy in valuating the ratees (divisional management). Put differently, raters are inclined to attribute ratees’ unsatisfactory performance to a lack of motivation/dedication by the latter rather than to a poor design of the strategy[37].

On these latter aspects which are more ‘political’, we will not deal with in the following. Notwithstanding, we believe that they are very important and that they must be considered during an implementation process.

4 A light-BSC for small and medium firms

As we noted in section 2 the BSC is a widely used performance measurement/management system. However BSC was designed mainly for large companies and its introduction and adoption concern mainly large companies[38], while analyses on small and medium firms (SMEs) is quite limited (Chow *et al.* 1997, Manville 2007, Fernandes *et al.* 2006, Gumbus and Lussier 2006)[39]. Some authors even question that for SMEs the costs of such instrument may exceed its potential benefits (Newing 1994, Hudson Smith and Hudson 2007, p. 396).

In order to see the drawbacks of BSC in SMEs, we will first analyse the peculiar SME features that could prevent the adoption of innovative business performance/management systems such as the BSC[40].

Firstly, SMEs are characterised by limited financial resources which, among others, could hinder the implementation of innovative performance measurement/management systems.

Secondly, SMEs are characterised by flat and flexible structures (adhocracies)[41]. Since human resources are often employed in various activities from operational to managerial ones, they often end up neglecting the latter. Moreover the expertise required is often focused on technical aspects (productions and operations aspects) to the detriment of managerial sides.

Thirdly SMEs have usually a reactive and a “fire-fighting” mentality: strategic planning is limited which implies a short term orientation and a focus on day by day activities.

Fourthly there is often “misconception of performance measurement”[42]. SMEs seem to have difficulty in understanding the potential benefits of innovative business systems. Since the decisions are made on the basis of informal processes, the introduction of innovative performance measurement systems is perceived as a damage to flexibility and reaction capability because of the necessity to introduce rigid procedures. This latter aspect is an important one since SMEs’ organizational structures are flat and flexible, and therefore SMEs are usually able to adapt to market changes and to establish closer relationships with their customers. The introduction of a formal business performance system can be perceived therefore as a danger for flexibility.

These are, roughly speaking the main characteristics of SMEs which could hinder the development of a BSC.

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[36] Manville (2007, p. 165). This fact is also supported by Neely and Bourne (2000) (quoted by Manville 2007).

[37] See Wong-On-Wing *et al.* (2007).

[38] Hoque and James (2000).

[39] Gumbus and Lussier (2006, p. 408) reviewing the literature from 2000 to 2003 find that in international small business/entrepreneurship journals there was no paper whose topic was BSC.

[40] About the relationship between SMEs’ characteristics and non traditional performance measurement systems, see the recent survey by Garengo *et al*. (2005).

[41] Hudson *et al.* (2001, p. 1105).

[42] Garengo et al. (2005, p. 30).

In order to integrate both the SMEs' characteristics and the critical aspects of BSC implementation (as elicited by the empirical results), we propose a "light-BSC". In the following we will describe the phases for its implementation and its main features.
Various ways of BSC implementation had been proposed and described in literature.
To begin with, for example Kaplan and Norton (1996a, p.5) originally proposed a four step procedure which goes from the "translation of the vision" to "communication to middle managers" (setting goals, rewards systems,…) to "business planning" (setting targets, allocation of resources, integration of strategic planning with budgets) until, at the end, to the "feedback and learning" (monitoring and feedback) phase. Other authors in their case studies proposed different steps in the BSC's implementation. Lohman *et al* (2004) implement the BCS with nine phases[43]. Papalexandris *et al.* (2005, pp. 217-222) suggest a general six phase approach (1) preparation for the project, 2) understanding the vision and the strategy, 3) identification of the strategic priorities and objectives, 4) selection of the performance measures, 5) operationalization of the project, 6) implementation and rolling out the system)[44], while Fernandes *et al.* (2006) follow an eight-phase implementation procedure[45].
In developing a BSC for small firms we will use, because of SMEs characteristics, a simplified process implementation, according to the features of SMEs we have described. We saw in the previous section that a SME exhibits usually some features that may be a hindrance to the introduction of a Balanced Scorecard. Among these characteristics, two of them seem to us particularly important: the "fire-fighting mentality" and "the misconception of the performance measurement". In order to overcome these two difficulties we propose an implementation which begins with the individuation of a strategic priority of the firm. According to the identified priority a team of management/employees is chosen. Then, once the priority is identified, the selected management has to transform this priority in a strategic theme and to select a set of proper measures. Then the strategic theme has to be implemented, communicated, in order to have an aligned organization. The last phase is the feedback re-evalutation of the system adopted.

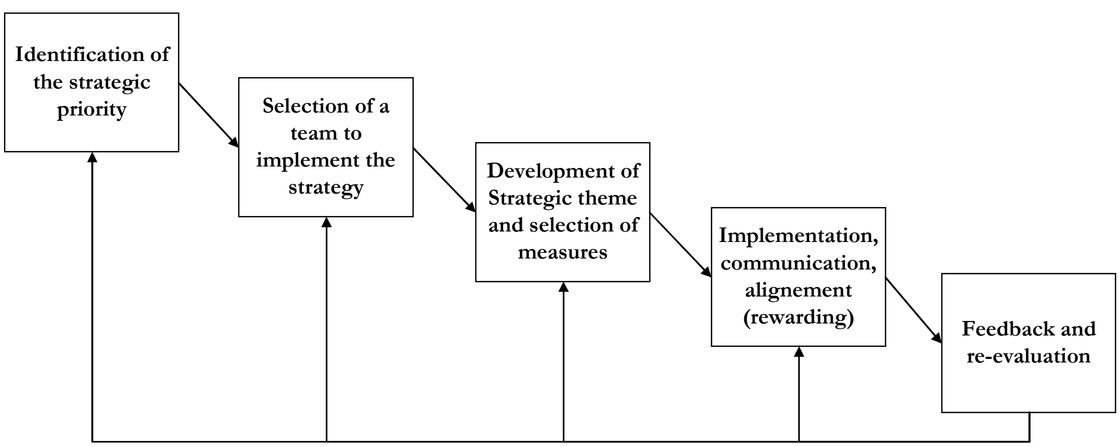

Fig. 3. Implementation of a light-BSC (small BSC).

[43] The phases are: 1) Definition of mission statement, 2) identification of strategic objective, 3) understanding each area's role in achieving the strategic objectives, 4) development of performance measures for each area, 5) communication to lower levels of organization of strategic objectives and measures, and development of performance measures at each level, 6) guarantee consistency among the performance criteria at each level and the strategic objectives, 7) assure compatibility between performance measures used in all areas, 8) use business performance system, 9) re-evaluation of the business performance measurement. They follow Neely *et al* (1995, p. 101) who quote Wisner and Fawcett (1991) as original source.
[44] Their study is interesting, among other things, for the fact that they consider both core activities and support activities for each phase. In a previous study Papalexandris *et al.* (2004) adopted a seven phase approach.
[45] These phases are: 1) project initiation, 2) strategy clarification, 3) strategy analysis, 4) KPI analysis, 5) measurement analysis, 6) strategy initiation, 7) implementation plan and 8) formal review.

First of all, we note that the light-BSC obviously is not a fully-fledged BSC, since it does not encompass the whole company's strategy. On the contrary it concentrates only on a single aspect which is the firm's priority. However, it involves a "full" implementation of this single aspect, from the top management to the shop floor. In other words the light-BSC can be seen as a fully implemented strategic theme.
Secondly we prefer to begin by introducing only the necessary measures for the implementation of the strategic theme, rather than to proceed to a complete measurement since, as we saw earlier, according to existing literature it seems that BSC produces better performance when employed as a management system rather than as a measurement system. Therefore the BSC we propose, limits the "measurement phase" to the indicators which are necessary for the strategy's implementation. One consequence of this is that the number of measures should be limited, with the associated advantage that the management of such measures should be more feasible[46]. Therefore this implementation method is neither a Type I nor a Type II (or III). It is not obviously a Type II (or, *a fortiori*, a Type III) since, for example, it does not include all the aspects of firm's strategy. On the other hand it is not a Type I for two main reasons: the first one is that it is not a complete measurement system, the second one is that it includes some strategic aspects that are not developed in a measurement system. From a first perspective we may say, therefore, that Light-BSC lies between a fully fledged performance measurement system and a fully fledged strategic management one.
From a second perspective it lies between a fire-fighting mentality and a strategic-planning approach. Indeed if on one side it preserves some "fire-fighting" features, such as the ability to react promptly towards a priority; on the other side, however, it represents a move towards a "proactive" attitude[47] and a strategic oriented environment.

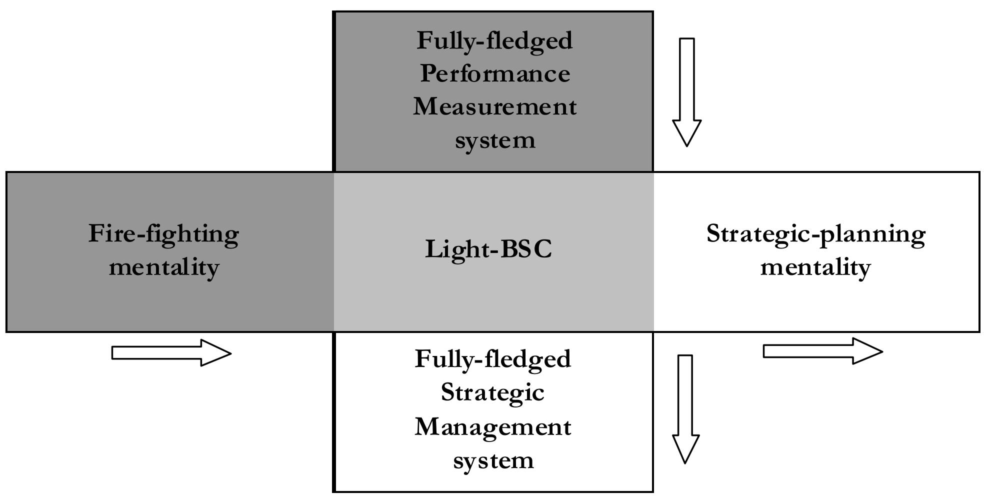

Fig. 4. Positioning of the light-BSC.

In this way the main positive aspects of the light-BSC could be identified in the following way:

1) Because the attention is concentrated on priorities light-BSC should assure advantages also in the short run. This fact on one side contrasts the characteristic that the BSC offers

[46] According to Lipe and Salterio (2002), when the number of measurement is high, management usually exhibits some cognitive limitation since people are not able to handle different multiple pieces of information.
[47] Bitici (1994) suggests that an aim of a business performance management system is to "encourage proactive rather than reactive management" (Tangen 2004, p. 726).

advantages mainly in the long run[48]. Indeed it offers also advantages in the short run. This should facilitate the overcoming of the so-called "misconception of performance measurement"[49].

2) Because of its "lightness", i.e. the fact that the firm is concentrated only on one goal (and consequently the set of measures/variables is limited) the implementation and the "maintenance" of such instrument should be facilitated and not too resource-consuming[50].
3) Because of its orientation towards priorities, this instrument should be flexible and capable of adapting to an environment in continuous change. This fact should help to overcome another characteristic of SMEs: the difficulty to accept highly formalized measurement systems[51] (fear of bureaucratization).
4) Because of the fully implementation of a strategic theme (alignment) light-BSC should have a 'maieutic function'. Indeed it obliges managers to think strategically (even if this aspect is limited to one single priority) in terms of cause-and-effect relationships among the critical areas and it leads them to "align" the strategy with the operational activities. For this reason, the 'maieutic function' should involve also the shop floor of the firm: also the employees should be 'educated' to act according the organization's goals and about the relationships between the different areas[52].

Moreover, with reference to this latter point, we argue that light-BSC should facilitate the reconciliation between strategy and budgeting. Light-BSC is fully compatible with a recent proposal of Norton (2006) and Norton and Peck (2006). In these articles it is noted that the main difficulty[53] between strategy and budgeting arises because of the different nature of the two: while strategy is holistic and encompasses all the company's functions, budgeting is "siloed" and refers to the single functions (e.g. finance, administration). The reconciliation between strategy and budget involves the use of strategic themes. In particular Norton (2006) proposes to use strategic themes as the base to design the budget accountability: for each strategic theme a corresponding "portfolio of cross-functional initiatives" is defined concerning different functions/areas (see Figure 5) [54]. Since the light-BSC is 'centered' on a strategic theme, the reconciliation with budget should be facilitated.

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[48] On this point see Hvolby and Thorstenson (2000) and McAdam (2000), quoted by Hudson Smith and Smith (2007, p. 396). According to these authors this fact is a serious drawback of BSC when applied to SMEs.
[49] See, above, note 42.
[50] For example, it should not be necessary to invest huge amount of money in IT solutions. On the role of IT solutions for BSC see also Olve *et al.* (2004). See also, however on this point, the drawbacks identified by Neely and Bourne (2000) and described above.
[51] See, e.g. McAdam (2000, p. 310).
[52] Moreover, if the light-BSC produces satisfying results, the management could be motivates to develop a fully-fledged BSC (Type II-III).
[53] Norton (2006) refers to a research made by the Balance Scorecard Collaborative according to which 60% of organizations experiments problems in joining strategies to their budgets.
[54] For further information we refer to the original papers of Norton (2006) and Norton-Peck (2006) quoted above.

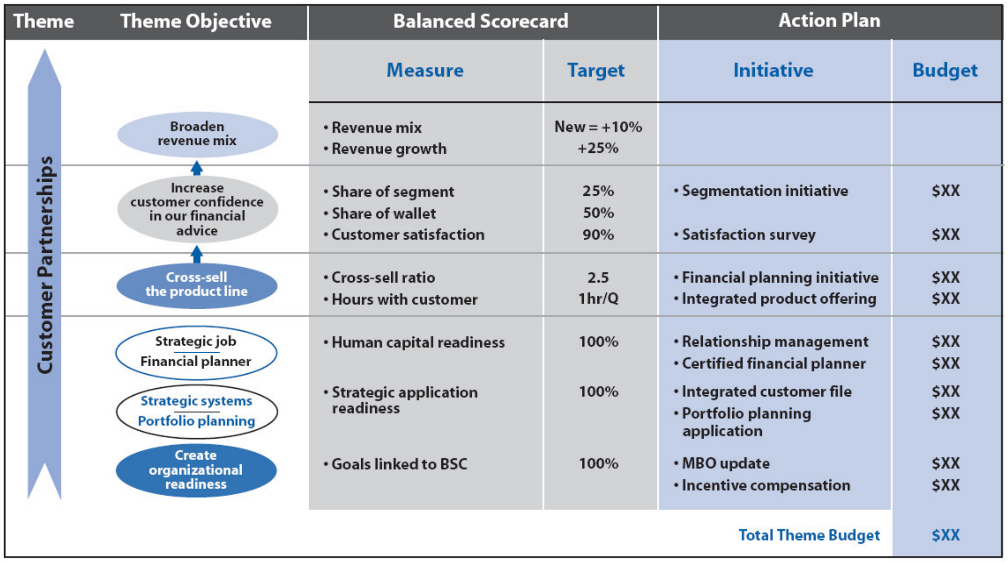

Fig. 5. From strategic theme to budget (source, Norton, 2006 Fig. 2).

5 Conclusions

In this study we proposed a BSC conceived on the characteristics of SMEs (light-BSC).

In order to do this we considered two different streams of literature: on one hand we examine the main studies concerning the implementation of BSC, by highlighting the critical factors; on the other hand we considered the characteristics of SMEs with reference to the introduction of innovative business performance systems. On the basis of the results of these streams of literature we proposed a light-BSC. The light-BSC encompasses the critical success factors of BSC (cause and effect relationships between the different areas, implementation of company's strategy, alignment) and is compatible with the characteristics of SMEs ("fire fighting mentality", short term orientation, the need to preserve flexibility). We also saw that the light-BSC is able to favour a reconciliation between strategy and budgeting.

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