THE USE OF THE BALANCED SCORECARD FOR STRATEGIC CAPITAL DECISION MAKING

Nurullah Uckun

ABSTRACT: The complexity surrounding strategic capital investments present challenges to managers charged with evaluating these projects. In particular over-reliance on financial appraisal tools is thought to bias decision-makers against undertaking strategic projects that are crucial to the development of business capability and innovation. In response to this concern, several emergent analysis tools have been advanced as means to integrate strategic and financial analyses of capital investment projects. This paper examines the use of both conventional financial analysis tools and selected emergent analysis approaches in the capital investment decision-making.

Numerous calls have been made for a more sophisticated approach to supporting strategic investment project appraisal by integrating strategic and financial considerations. To this end, various analysis tools, which combine quantitative and qualitative factors, have been linked with strategic capital investment decision-making. I strongly recommend a multi-layer evaluation process, or an evaluation process derived from the balanced scorecard, for the appraisal of strategic investment projects.

Kaplan and Norton (1992) devised the popular ‘balanced scorecard’ as a set of measures that link financial measures of performance with non-financial measures (focused on customers, internal business processes, and innovation and learning), to give managers an integrated framework for managing and evaluating their businesses. Kaplan and Norton (2001) advocated the balanced scorecard as a strategic management and decision-making tool, leading others to suggest that a balanced scorecard approach could be usefully applied to strategic investment decision-making. Few researchers have explored its use in capital investment practice, however.

Keywords: Strategic investment, balanced scorecard, Decision-making

Introduction

What is strategy? It is easy to see what strategy means if the context is war. It is the way in which the basic aim will be achieved. In the case of war it is to defeat the enemy in the quickest, least costly method. In business it may seem like warfare, but it is often difficult to identify the enemy and it also seems as though the war is never won. Every new day brings new challenges for the company. In war, the successful leader has to gather information before deciding a strategy-information about the enemy, the terrain, the conditions that might prevail and also facts about the capabilities and capacities of one’s own troops. In the same way in business, before a strategy is chosen the facts must be gathered about the nature of the world in which it intends to operate.

Capital investment projects may be relatively ‘operational’ in nature or have a more ‘strategic’ focus. ‘Strategic’ projects are substantial investments that involve high levels of risk, produce hard-to-quantify (or intangible) outcomes, and have a significant long-term impact on corporate performance. Typical examples include company acquisitions and mergers, the introduction of major new product lines, the installation of new manufacturing processes, the introduction of advanced manufacturing and business technologies, and substantial shifts in production capability (Mintzberg et al., 1976; Butler et al., 1991; Accola, 1994; Slagmulder et al., 1995; Van Cauwenbergh et al., 1996; Slagmulder, 1997).
The complexity and uncertainty surrounding strategic capital investment projects present particular challenges to management accountants charged with their evaluation (Butler et al., 1991; Slagmulder et al., 1995; Slagmulder, 1997; Abdel-Kader and Dugdale, 1998; Dempsey, 2003). Notably, it has been suggested that over-reliance on financial appraisal tools may bias decision-makers against strategic investment projects (Ashford et al., 1988;) thus reducing their uptake and impeding the development of business innovation and capability. Empirical surveys have reported a good deal about capital investment decision-making practice in general. Yet, despite the importance of strategic investments, little specific attention has been given to developments in how these complex and uncertain projects are assessed.

However, the record on measuring and controlling strategic investments has not been impressive. Hochstrasser and Griffiths(1991) found that only 18% of the organizations in their sample rely on rigorous methods to calculate the benefits of strategic investment. Costs are significantly underestimated(Fitzgerald G. 1998). At least 22% of expenditure on strategic investment is wasted and between 34 and 40% of IT projects realize no net benefits, however measured (Willcocks L, Lester S, 1994)

The reason for these failures can be complex: technical, human resource, environmental, or organizational and management issues interrelate where explanations are sought. Major barriers, identified by a range of studies, occur in how the strategic investment is evaluated and controlled(Hochstrasser and Griffiths,1991).

This paper studies the part of the evaluation and justification process that senior managers consider as being the most important: the feasibility evaluation(Willcocks L, Lester S, 1994). More specifically, ex ante evaluation techniques used to justify strategic capital investments are examined, classified and discussed. Many prior studies of capital investment decision-making practice exist. However, are view of this literature reveals inconsistent findings, little direct comparison between strategic and non-strategic project evaluation and little investigation of the use of emergent analysis techniques for strategic investment appraisal.

2. Traditional evaluation methods

Allocating resources among competing investment projects is one of the most critical decisions made by top management, as it is the means of implementing a firm’s strategy (McGrath et al., 2004; Bowman and Hurry, 1993). Considerable attention has been devoted to investigating the methods and techniques used in evaluating and selecting investment projects (see, for example, Segelod, 1998; Sangster, 1993; and Mukherjee and Henderson, 1987 for an overview) but little attention has been given to the determinants of those choices.

Capital budgeting practices are defined as the methods and techniques used to evaluate and select an investment project (i.e., the decision making role of the accounting system). Capital budgeting practices help managers to select n out of N investment projects with the highest profits at an acceptable ‘risk of ruin’. Literature has generally distinguished among advanced and simple (or naive) capital budgeting practices (Haka, 1987). Simple or naive capital budgeting practices (such as the payback and accounting rate of return) generally do not use cash flows, do not consider the time value of Money and do not incorporate risk in a systematic manner. Advanced capital budgeting practices (such as the internal rate of return, IRR, or the net present value, NPV) are those that consider cash flows, risk, and the time value of money.

The Payback Period technique (PP) should be considered as the least suitable CIAT for the appraisal of strategic investment projects. Due to the fact that projects are judged on the period needed to compensate the initial investment, projects with fast payback are favored. As a result, companies using the PP technique will tend to accept too many short-lived projects and reject too many long-lived ones(Butler, R., Davies, L., Pike, R., Sharp, J., 1991). This is especially harmful for strategic investments, because the returns from strategic investments tend to be long term (see infra). Furthermore, the inability to incorporate risk into the appraisal and the ignorance of the time value of Money make this technique inapt for the evaluation of strategic projects. PP may be an adequate rule of thumb, but considering the shortcomings, major investment decisions should not be based solely on the results of PP calculations.

Return On Investment (ROI) is more adequate than PP because the total lifecycle of the investment is taken into account. Nevertheless, as with PP, the time value of money is not taken into consideration. Risk can be entered into the appraisal to a certain extent by adjusting the hurdle by which the projects are judged, but this is not useful when dealing with mutually exclusive
projects (selecting between two CRM systems for example). Unlike the previous mentioned techniques, Internal Rate of Return (IRR) takes the time value of Money into consideration by introducing a discount factor. This is a major improvement and makes this technique more useful.

Still, there are some disadvantages:
- The result of IRR is a percentage. This makes it difficult to compare projects that differ substantially in size and outcome, since no absolute figures are given.
- If the IRR differs substantially from the cost of capital, it will become difficult to compare projects with a different time pattern.
- There may exist more than one IRR for an investment.
- When this technique is used as a selection tool for mutual exclusive investment projects, risks are not accounted for. It lacks the possibility of entering risk-levels into the selection. This is a major disadvantage, especially when used in an strategic environment (see infra) (based on Butler, R., Davies, L., Pike, R., Sharp, J., 1991).

The Net Present Value (NPV) technique calculates the present value of the investment’s money flows, using a discount rate. In opposite to IRR, different rates can be used to reflect the risk-levels of mutual exclusive investment. The NPV technique is considered as being theoretically superior to the IRR technique (Butler, R., Davies, L., Pike, R., Sharp, J., 1991).

Practice in regard to the use of capital investment financial analysis techniques has been well investigated (see, for example, the following UK studies: Pike and Wolfe, 1988; Pike, 1988; Lefley, 1994; Pike, 1996; Abdel-Kader and Dugdale, 1998; Arnold and Hatzopoulos, 2000). The use of ‘conventional’ investment appraisal techniques (payback [PB], return on assets or investment [ROA or ROI], internal rate of return [IRR] and net present value [NPV]), and risk analysis approaches (e.g. sensitivity analysis; adjustment of the payback period or discount rate), have been examined in almost all of these prior studies.

The research findings are inconsistent, however. It is difficult to determine the extent to which these inconsistencies may be an artefact of the different populations, sample sizes and questions used in the various empirical studies (Pike, 1996; Arnold and Hatzopoulos, 2000). While comparisons must be interpreted with caution for this reason, the evidence we seems to paint a confusing picture of capital investment analysis practice. For example, Lefley’s (1994) study of large UK manufacturing firms reported that the most popular investment appraisal technique was the payback technique (used by 94% of the companies while only 69% used either IRR or NPV). Lefley’s findings appeared to indicate a decline in the use of the sophisticated methods and suggested that the payback method was the most popular means of assessing risk in advanced manufacturing technology investments—a ‘strategic’ type of investment (71% use). In contrast, Pike (1996), Abdel-Kader and Dugdale (1998), and Arnold and Hatzopoulos (2000) reported sensitivity analysis as the most widely used technique for dealing with investment project risk.

Pike (1996) and Abdel-Kader and Dugdale (1998) found that most companies use more than one financial analysis technique in investment appraisal. Although they noted widespread use of the discounted cashflow (DCF) techniques NPV and IRR, with the latter used more than the former, Abdel-Kader and Dugdale (1998, p. 273) pointed out that practitioners attributed the highest importance to relatively unsophisticated methods:

On the other hand, Arnold and Hatzopoulos (2000) found that practitioners placed greatest emphasis on the discounting techniques (NPV and IRR) with NPV rated higher than IRR (97% of large firms used NPV; 84% used IRR; 66% used payback).

These findings from key prior studies present us with contradictions, inconsistencies and an overall lack of clarity. Also, they have often overlooked the limitations of conventional financial analysis tools for supporting strategic investment decisions in particular.

Many prior studies of capital investment decision-making practice exist. However, a review of this literature reveals inconsistent findings, little direct comparison between strategic and non-strategic project evaluation and little investigation of the use of emergent analysis techniques for strategic investment appraisal.

In light of these shortcomings of conventional financial analyses, it has been argued that strategic investment projects should not be justified solely on their capacity to create economic value for the firm. Rather, a complementary evaluation of their contribution to competitive strategy is required (Butler et al., 1991; Abdel-Kader and Dugdale, 1998; Adler, 2000). Product quality, fit with business strategy and improved competitive position are amongst those factors identified as important influences on strategic investment.
decision-making (Pike et al., 1989). Yet, these hard-to-quantify benefits from strategic investments remain difficult to evaluate using conventional financial techniques, suggesting that strategic investment decisionmaking may require a different approach (Butler et al., 1991; Van Cauwenbergh et al., 1996; Covin et al., 2001).

3. Balanced scorecard

Numerous calls have been made for a more sophisticated approach to supporting strategic investment project appraisal by integrating strategic and financial considerations (Slagmulder et al., 1995; Lefley, 1996; Adler, 2000). To this end, various analysis tools, which combine quantitative and qualitative factors, have been linked with strategic capital investment decision-making. Balanced scorecard, all at the forefront of recent strategic analysis development, is included in the current study below.

Kaplan and Norton (1992) devised the popular ‘balanced scorecard’ as a set of measures that link financial measures of performance with non-financial measures (focused on customers, internal business processes, and innovation and learning), to give managers an integrated framework for managing and evaluating their businesses. Kaplan and Norton (2001) advocated the balanced scorecard as a strategic management and decision-making tool, leading others to suggest that a balanced scorecard approach could be usefully applied to strategic investment decision-making (Milis and Mercken, 2003; Lyons et al., 2003).

First devised by Kaplan and Norton (1992), the balanced scorecard approach comprises four perspectives: learning and growth perspective, internal process perspective, customer perspective, and financial perspective (Kaplan & Norton, 1993, 1996a, 1996b, 1996c, 2001a, 2001b, 2001c, 2001d, 2004a, 2004b, 2004c, 2004d, 2006). BSC is a strategic approach and performance management system which organizations can use for vision and strategy implementation. The BSC model comprises four new management processes that, separately and in combination, help link long-term strategic objectives with short-term actions (Kaplan & Norton, 1996a). Numerous companies and industries have adopted BSC, which meets several management needs. The BSC model is more than a collection of financial and non-financial measurements, and represents a translation of business unit strategy into a linked set of measures that define both long-term strategic objectives and the mechanisms for achieving and obtaining feedback regarding those objectives (Kaplan & Norton, 1996a). Furthermore, Kaplan and Norton (2004a) created a powerful new tool, strategy map, which companies can use to describe the links between intangible assets and value creation with an unprecedented degree of clarity and precision. Strategy map can be used to link processes with desired outcomes; to evaluate, measure, and improve the processes most critical to success, and to target investments in human, informational, and organizational capital (Kaplan & Norton, 2004a, 2004b).

The BSC model identifies four related perspectives on activities that are likely to be critical to most organizations and to all levels within organizations: (a) investing in learning and growth capabilities, (b) improving internal process efficiencies, (c) providing customer value, and (d) increasing financial success (Kaplan & Norton, 1992, 1993, 1996a, 1996b, 1996c, 2001a, 2004b).

3.1. The learning and growth perspective

Kaplan and Norton (1992) based their BSC model on activities that develop the learning and growth perspective. This perspective captures the ability of employees, information systems, and organizational alignment to manage a business and adapt to change. Process success depends on skilled and motivated employees, as well as accurate and timely information.

3.2. The internal process perspective

A causal model of BSC assumes that employee capabilities drive internal process improvement. Kaplan and Norton divided firm generic value chain activities into four high level process areas: (1) innovation; (2) customer management; (3) operations; and (4) regulations and environment. Each of these areas can include both major processes and sub-processes. The organizational pie thus can be sliced in various ways (Beiman & Sun, 2003).

3.3. The customer perspective

The customer perspective also identifies the outcomes associated with delivering differentiated value propositions. These outcomes include market share in specific customer segments, account sharing with targeted customers, acquisition and retention of customers in targeted segments, and customer profitability. Some studies have identified a significant relationship between customer satisfaction and performance,

3.4. The financial perspective

Financial performance measures indicate whether firm strategy, implementation, and execution contribute to bottom-line improvement. The financial perspective includes three measures important to shareholders. Return-on-capital and cash flow reflect short-term preference, while forecast reliability indicates the desire of the corporate parent to reduce historical uncertainty associated with unexpected performance variation. Finally, project profitability focuses on the project as the basic unit for planning and control, while sales backlog helps reduce performance uncertainty (Kaplan & Norton, 1993).

When looking at this method more closely, one can conclude that this framework is a mixture of (traditional) CIATs and new evaluation methods. On the one hand, the (traditional) finance based evaluation techniques are not abandoned (financial perspective) (Willcocks L, Lester S, 1994). On the other hand, the metrics used in a balanced scorecard framework are aligned to the company’s strategy and business aims, which stimulate a strategic fit.

The balanced scorecard encourages a shift from financial based evaluation techniques to strategy and vision. This is as a result of the balanced scorecard needing substantially more input from the top management than does the traditional techniques. Traditional techniques in most cases are designed and overseen by financial experts (Kaplan & Norton, 1993).

The balanced scorecard forces management to take a broad view on strategic investments. This is one of the main advantages of this method. Another advantage is that many different evaluation techniques can be integrated into the framework. The financial scorecard can, for example, contain the ROI, NPV or any other (adjusted) CIAT. A further advantage is that the framework can be used for the feasibility evaluation and also for the follow up and ex-post evaluation.

Nevertheless, there are some disadvantages and pitfalls when using the balanced scorecard for the evaluation of strategic investments. First of all, there are probably no generic strategic investment measures that fit all organizations. Metrics must fit a specific organization’s goals, activities and customer base. Secondly, when using the balanced scorecard for strategic investment purposes, the perspective might be too narrow if the scorecard is just seen from an strategic investment department perspective. The customer perspective is reduced to the perspective of the internal users and the financial perspective might come to be interpreted as: How do we in strategic investment appear to senior management? A view that is too narrow can jeopardize the strategic fit. (Willcocks L, Lester S, 1994)

4. Conclusions

In practice, the traditional CIATs are by far the most used techniques. They are well-known, well-understood and easy to use. They are primarily focused on financial gains and are developed to maximize shareholder profits. The fact that most decisions on strategic investments are still taken by the financial department might add to the choice for these traditional techniques.

Nevertheless, serious doubts about the fitness of these techniques in a strategic investment environment arise. Strategic investments have special characteristics (high risk, L/Treturn, large proportion of intangible/hidden costs and benefits . . .) which makes the use of these techniques very difficult and the reliability of the outcome most uncertain.

Criticisms still surround the use of financial analysis techniques to evaluate strategic projects and the call to adopt more ‘strategic’ appraisal approaches continues. Financial analysis techniques still dominate the appraisal of all categories of capital investment projects.

Since all of these techniques have their negative points, it is safe to say that reliance on a sole technique may lead to sub-optimization or even failure. Therefore a fourth group of justification methods is developed that uses a mixture of techniques, eliminating or diminishing the weaknesses of each of the techniques used (multi-layer evaluation, the balanced scorecard approach). We strongly suggest using a multi-layer evaluation process or an evaluation process derived from the balanced scorecard for the appraisal of strategic investment projects.

References


