The tyranny of the Balanced Scorecard in the innovation economy

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The Tyranny of the Balanced Scorecard in the Innovation Economy

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Abstract

The balanced scorecard (BSC) has developed as a very useful managerial tool from the mid-1990s, and has met with general (and often enthusiastic) acceptance in both business and academic circles. In the knowledge-networked innovation economy of the early 21st century, which is increasingly characterized by globally integrated supply and demand chains, outsourcing of traditional business competencies (even innovation itself), and an emphasis on intellectual capital in contrast to physical capital, the BSC is now showing serious deficiencies. The tyranny of the BSC as a measurement 'straightjacket' is beginning to jeopardize the survival of firms, and hinders much-needed business ecosystem innovation, thereby negatively affecting customer value rejuvenation, shareholders' benefits, and other stakeholders' as well as societal benefits in general.

This article traces the rationale, features, development and application of the BSC in the past ten years, and then provides a critical review of its key problematic effects on firms and their stakeholders in today's changing business environment. Five major problem areas are identified and discussed, with selected business examples. An alternative to the BSC is proposed and motivated, involving drastic change in both the underlying assumptions of the BSC and moving from a systematic, single enterprise focus to a systemic, dynamic framework – a systemic management system, including a systemic scorecard.

Key words: Balanced Scorecard; Innovation; Intellectual Capital; Systemic Scorecard

Introduction

When introduced in the 1990s, the balanced scorecard (BSC) first proposed by Kaplan and Norton (1992; 1996) was an innovative approach to measuring a firm's performance. Instead of just measuring the financial results of a firm, the important and logical causal factors for financial outcomes were identified and included in an expanded and 'balanced scorecard'. Others had previously proposed measurement of firms' performance also in non-financial terms (see for instance Eccles, 1991), but this was the first time that performance measurement was proposed in an integrated causal - and most importantly systematic - way.

Prior to BSC, companies had already been measuring non-financial indicators such as customer satisfaction, cycle times, market shares, product quality, and service quality. The BSC, which was developed from a multi-company study, now provided a multi-dimensional view of the company, linking financial and non-financial measures in a coherent system. The new measurement approach has been considered as a very useful tool to enhance the understanding of organizational dynamics in a cause-effect relationship within an organization, and to improve a company's efficiency. The BSC approach became well-known and generally accepted in the academic as well as in the business world (Ampuero, *et al*., 1998), being widely adopted in various industries and organizations, including large U.S. companies as different as Federal Express and General Electric - and public and non-profit organizations.

From industrial to innovation economy

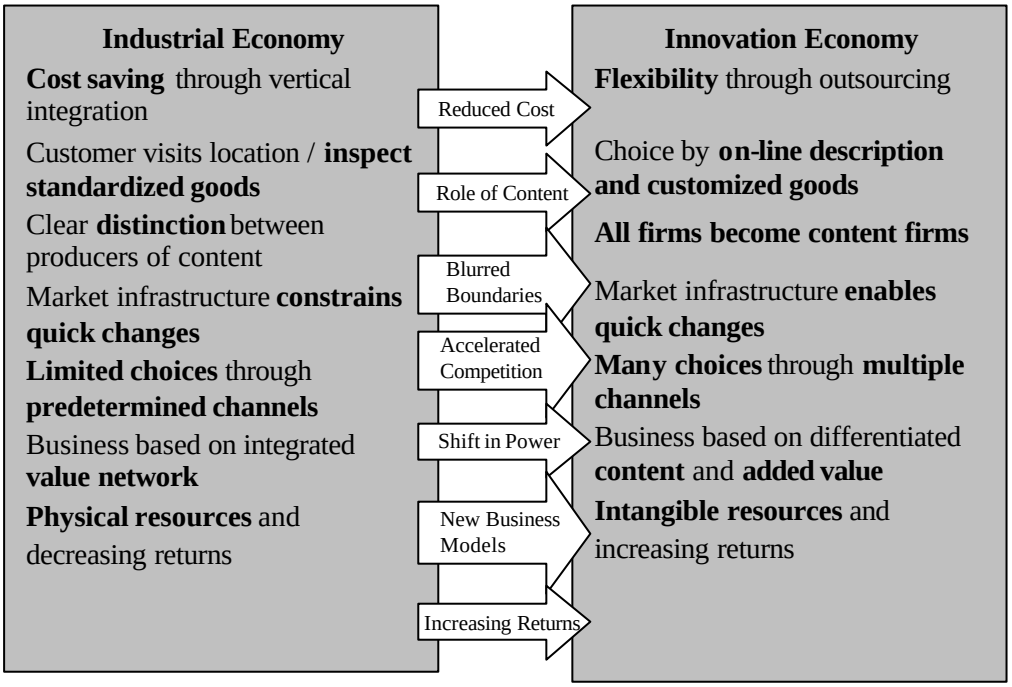
With a shift from the industrial economy towards an economy that is now predominantly characterized by intangible assets, such as knowledge and innovative capability, organizations have to manage increasing levels of complexity, mobility and uncertainty. The often disruptive changes that have been occurring since about the last decade of the 20th century, have blurred traditional industry and organizational boundaries and have shed a new light on traditional business competencies, processes and practices. The ability to manage knowledge-based intellect is of critical importance in this new environment (Quinn, 1992). The evolving of the globally networked society has changed our world into a global village that constantly undergoes dynamic and unpredictable socio-cultural changes (Leibold *et al*., 2002). At the root of these developments are the advancing technological possibilities that enhance the pace of communication, causing an increase in organizational connectivity and innovation. Moore's law (1965) and Metcalfe's law (Buckman, 2004, p. 99) respectively show that the speed of technological advancement and connectivity is growing exponentially and with a seemingly unfathomable velocity. This is resulting in an unprecedented increase in the rate of value innovation, and new ways in how it is generated, with some observers now contending that we have entered the era of the innovation economy (see for instance Christensen and Raynor, 2003).

The core principles that underpin the modern enterprise are all being challenged today – replication, specialization, hierarchy, extrinsic rewards, functional integration, restructuring, business process reengineering, enterprise resource planning, supply chain synchronization, customer relationship management – if not in their fundamental nature, then in their

application. In many instances key internal functions and traditional 'core competencies' are moving outside the firm, being outsourced to network partners in integrated supply and demand chains. While most traditional business management principles of the industrial economy are still valid in a limited sense (for existing, proven business models that are still successful in some environments), they now seem inadequate in coping with disruptive change, either in an adaptive or creative way.

Figure 1. depicts the major differences in features between the industrial economy of the 20th century and the innovation economy of the early 21st century.

Figure 1. From the Industrial Economy to the Innovation Economy



Competition in the innovation economy is now increasingly characterized by the rapid emergence of brand-owning companies that devote their energies to organizational fitness (Beer, 2002), to create and meet customer need experiences, and to drive value innovation in business processes across supply and demand chains and within their particular internal links. Effective supply and demand chains support deeper levels of customer 'success' (beyond customer satisfaction and relationships), as well as leverage and utilize customer knowledge (Gibbert *et al.*, 2002) and value chain partner knowledge for appropriate innovation. These new developments have resulted in fundamental new ways of viewing the nature of the firm, core capabilities, premises of strategy creation and implementation, and importantly also measuring the performance of business activities.

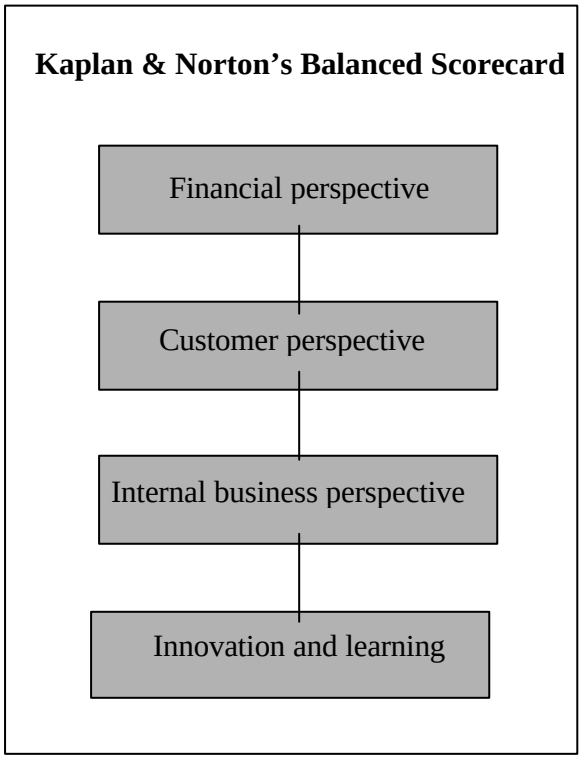
Although this article focuses on the BSC and its relevance for companies in the innovation economy, the subsequent reviews and implications are also (to an equal or lesser degree) relevant for other types of business performance measurements (or scorecards), such as

shareholder value, market share, human resource accounting, economic value-added, intellectual capital indices, and knowledge management scorecards. All of the traditional business performance measures suffer to some degree because of the underlying and increasingly invalid assumptions rooted in the industrial economy. After the analysis of the rationale, development, features and applications of the BSC, as well as a critical review, we propose an alternative, systemic approach that is more appropriate for dealing with today's networked corporate world in the innovation economy.

The rationale, development, features and applications of the balanced scorecard

A balanced view on companies' operations and performance, including financial as well as non-financial measures, related to marketing, research and development, social responsibility and employees had already been described 25 years ago by Parker (1979). Since then the well-known and widely-adopted balanced scorecard developed by Kaplan and Norton (1992, 1996, 2000) has become a major management planning and measuring tool (see Figure 2).

Figure 2. The Balanced Scorecard and Its Major Dimensions



Source: Adapted from Kaplan and Norton (1992)

The rationale of the BSC focuses on providing a systematic tool, combining financial and non-financial performance indicators in one coherent measurement system. Metrics are constructed according to a predefined strategy, and the company's processes are aligned towards this strategy. Accordingly, the mindset of the BSC is based on the perception of the firm as a profitability machine, which needs to be optimized to reach maximum efficiency through measuring and controlling for mostly company-owned processes. The focus is the single company.

In order to do this, the BSC is designed to systematically measure the company in four areas: The *financial perspective* uses traditional accounting measures in order to evaluate a firm's short-term financial results. The *customer perspective* measures relate to customer satisfaction of identified target groups and is generally marketing-focussed. The *internal business process* view is based on the concept of the (internal company) value chain, including the process (or steps) needed to realize the sought product or service. The fourth and final dimension comprises the *innovation and learning perspective* that is inherent in a company, by measuring various human resources focused effects as well as learning systems support effectiveness.

By combining these four measures within the BSC, Kaplan and Norton attempt to establish the BSC as a representation of an organization's shared vision. By doing so, the BSC becomes not only a tool for measurement, but also a tool for strategic management. Intangible assets often run the risk of being underestimated, since neglecting them doesn't show up as immediately and as clearly as it does in the case of tangible assets. Thus, the BSC shifts attention from those areas that are not measured, to areas which are measured, since what is measured can be evaluated and what can be evaluated can be appraised (Hauser and Katz, 1998). Managers in turn will try to maximize performance in those areas that are measured and evaluated, even at the cost of neglecting other fields that are not included in the performance metrics.

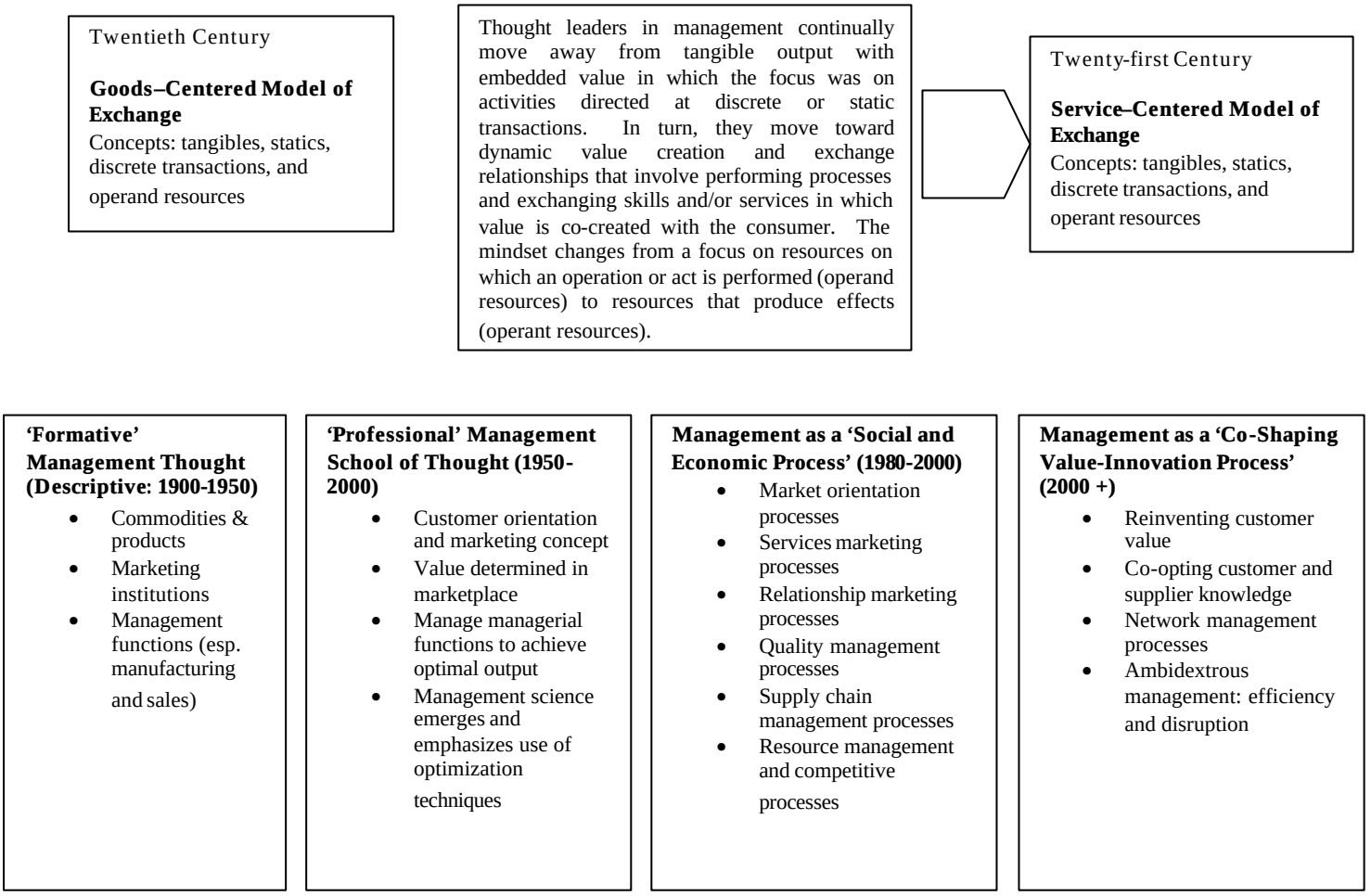
By clarifying the companies' strategy and facilitating its communication, the BSC sets out to serve as a "pull rope", in order to efficiently align the firm with a defined strategy towards which managers can align their actions and efforts. The systematic way in which the BSC is designed helps to reduce information overload and leads managers to prioritize important issues more easily. Finally, by trying to include future oriented measures, long-term planning is encouraged and regularly controlled for. In general, the top management team needs to be heavily involved in making the BSC work. After setting the strategy and creating a scorecard accordingly, the four perspectives of the BSC are applied in a recursive way and move the company forward along these measures. A coherent and logical view on the company should evolve and provide a view on the efficiency of the company. In their 2000 publication (Kaplan and Norton, 2000), Kaplan and Norton use the example of the Mobil Northern American Marketing and Refining, for which a BSC or a strategy map has been developed, emphasizing the importance the BSC plays in communicating the strategy top down. Their latest work (Kaplan and Norton, 2004) similarly builds upon the earlier concept of the BSC, including the measurement of intangible assets. These extensions of the BSC are however also limited by the five major problem categories of the original BSC approach, which are subsequently highlighted.

The changing premises and mindsets of the innovation economy

In the innovation economy, the core truths of business and strategy still apply – businesses must create value for customers and capture some of that value (adequate for survival) for shareholders. However, as illustrated in Figure 3, a fundamental shift has taken place in how competitive value creation and provision to customers are now effected, in comparison to the industrial economy, and managers must thoroughly grasp this to adopt the appropriate underlying mindset for strategic management in the innovation economy.

Business in the 21st century will never again be the same as it was in the 20th century – the rules of the innovation economy have made a – seemingly sudden – transition from a state of continuity to a state of discontinuity. Some companies have made the mental "jump" successfully: under Jack Welch, General Electric has reframed its business and has seen performance benefits as a result; IBM has transformed from a mainframe computer company to a computing services company; others such as Johnson & Johnson, L'Oreal, General Motors, Shell, Proctor & Gamble and Corning are shedding their traditional business identities and business models and emerging to new ones.

Figure 3 Toward a New Dominant Mindset for Strategic Management



Source: adapted from Vargo and Lusch, (2004).

Besides the significant shifts in managerial mindsets during the 20th century, as indicated in Figure 3 (Vargo and Lusch, 2004), the great shock in the late 20th and early 21st century is that systems cannot be fully understood by Newtonian-based analysis. The properties of the parts are not intrinsic properties, but can be understood only within the context of the larger whole. Thus, when we speak of management as a co-evolutionary process, we do not mean systematic processes that can be analytically reduced, mechanistically planned, or fully controlled, but rather systemic processes that can be holistically understood, influenced, guided, cultivated, and broadly measured. These concepts are further explained towards the end of this paper.

The traditional approaches to strategic management are predicated upon an emphasis on analysis, reason, and periods of stability. The analytical mindset typical of most of the 20th century presumes that any organization, industry, or market can be understood through reductionism – reducing the whole to its constituent parts for scrutiny and future direction. This indicates a strategic imagination that identifies the patterns in the environment, labels the

regularities that associates images necessary to cut through and perceive the mass of data generated by analysis, and utilize judgment and action based on experience. The major fallacy of the descriptive strategic mindset is a continuously expanding range of new descriptions, such as different industry analyses, different SWOT analyses, different competence analyses, different portfolio analyses, different scenario analyses, different value chain and scorecard mappings, and so on. All of these attempts are aimed at searching for a "perfect" strategy based on ever-increasing complex analyses, descriptions, and alternative reaction scenarios. Both the prediction and learning approaches to strategic management focus on analytical activities and gathering of experience, which, like data and information, are arguably essential resources for strategy making. Both Hamel (1998), and Roos and Victor (1999) call for a new theory of strategy management that would enable the field to develop creative, proactive strategic mindsets. In today's dynamic networked world, it is increasingly being accepted that the whole is more than the sum of the parts, and holistic thinking and approaches should replace, or at least complement, analytical ones.

For the past 50 years, competition has dominated the mindset of strategic thinking, planning, and implementation. With strategic thinking of 'out-performing' competition embedded in the building of competitive advantage, companies often achieve no more than incremental improvement – imitation and incremental innovation, and not core value (or disruptive) innovation (Kim and Mauborgne, 1999). Companies need to escape from the conventional competitive-goods mindset and adopt a collaborative value-innovation mindset, as illustrated in Table 1.

Table 1. Contrasting a Conventional Mindset with a Value Innovation Mindset

Key Elements of Strategy Mindsets	**Conventional Mindset (Goods-Centered Dominant Logic)**		**Value Innovation Mindset (Value/Service-Centered Dominant Logic)**
Industry Assumptions	Industry's conditions are given	———	Industry's conditions can be shaped
Goods	People exchange for goods, i.e. effects from operand resources	———	People exchange for value/service, i.e. effects from operant resources
Customers	Recipients of goods; market segments and group needs	———	Co-producers of value/service; individual profiles and custom needs
Value	Embedded in the operand resources; determined by the producer	———	Resulting from operant resources; determined by the customer
Capabilities	Leveraging current capabilities of a company	———	Leveraging current and potential capabilities of networks
Competition	Outperform/beat the competition	———	Reinvent value to shift the competitive base
Boundaries	Fixed, static company and market boundaries; closed systems	———	Flexible, dynamic company, market and network connections; open systems
Innovation	Incremental (product, processes, company, etc.)	———	Disruptive (value, business model, processes, etc.)
Systems & Functions (internal &	Closed, protected; Focus on	———	Open, shared; focus on external &

external)	internal value chain	internal value systems

Source: adapted from Kim and Mauborgne (2004); and Vargo and Lusch (2004)

The tyranny of the balanced scorecard in the innovation economy: critical review and implications

When applied in the new innovation economy, the BSC displays significant limitations in dealing with the new, rapidly changing and networked corporate environment. Research and practice in the 1990s have been very much engaged in improving measurable performance in order to optimize operational efficiency (Roos *et al*., 1997; Bontis *et al*., 1999; Russ, 2001). The BSC follows this logic of seeking efficiency and enables organizations to react to changes by aligning business processes to a defined strategy. However, as heavy hiking boots are a blessing when trying to climb a mountain, and a curse for a 100m sprint, the BSC in the innovation economy causes a tyrannical impact on the firm and its stakeholders. The specific disadvantages of the BSC can be identified that endanger the survival of the firm in the innovation economy, and five major problem categories arise, as henceforth discussed.

The BSC is a measurement tool that is relatively rigid. The four perspectives are the main categories, according to which key success factors are defined. In consequence, the BSC tends to force indicators into one of the four perspectives. By doing so, it limits the view on the company, since it leaves little room for cross-perspectives that might have a simultaneous impact on the company. Those that do not fit or cannot be categorized within the given framework of the four dimensions are in danger of being neglected. Kaplan and Norton however state that these categories should not become a straitjacket, but still treat them as an all encompassing view of possible measures (Bontis *et al*., 1999). This draws managerial attention from other possible categorizations and views that might provide a better picture of the business system. Moreover, the BSC might not only enhance a confirmation bias, enabling managers only to see what they want to see (or measure), but it ignores the changing nature of today's business environment. An example for the danger of sticking to given categories of performance measurement is the case of Encyclopaedia Britannica, which was locked into its traditional key success factors derived from the BSC, nearly going out of business (see box below).

In a dynamic business world, a firm has to co-evolve in collaboration with others. Only if a company co-evolves with its environment, can it benefit from change and new developments and harness the energy that resides within the system, such as collaborative synergies in costs and innovation or by co-creating the business environment pro-actively.

The Encyclopaedia Britannica saga

In 1768, three Scottish printers began publishing an integrated compendium of knowledge – the earliest and most famous in the English-speaking world. They called it Encyclopaedia Britannica. Since then, Encyclopedia Britannica has evolved through fifteen editions and to this day it is regarded as the world's most comprehensive and authoritative encyclopaedia. In 1920, Sears, Roebuck and Company, an American mail-order retailer, acquired Britannica and moved its headquarters from Edinburgh to Chicago. Ownership passed to William Benton in 1941, who then willed the company in the early 1970s to the Benton Foundation, a charitable organization whose income supports the communications programs at the University of Chicago. Under its American owners Britannica grew into a serious commercial enterprise, while sustaining its reputation as the world's most prestigious and comprehensive encyclopaedia. The content was revised every four or five years. The company built one of the most aggressive and successful direct sales forces in the world. By 1990, sales of Britannica's multivolume sets had reached an all-time high of about US$650 million. Dominant market share, steady if unspectacular growth, generous margins, and a two-hundred year history all testified to an extraordinarily compelling and stable brand. Since 1990, however, sales of Britannica, as of all printed encyclopaedias in the United States, have collapsed by over 80 percent. Britannica was under serious threat from a new competitor: the CD-ROM. The CD-ROM came from nowhere and destroyed the printed encyclopaedia business. Whereas Britannica sells for $1,500.00 to $2,200.00 per set (depending on the quality of the binding), CD-ROM encyclopaedias sell for $50 to $70. But hardly anybody pays even that: the vast majority of copies are given away to promote the sale of computers. With a marginal manufacturing cost of $1,50 per copy, the CD-ROM as a freebie makes economic sense. The marginal cost of Britannica, in contrast, is about $250 for production plus about $500 to $600 for the salesperson's commission.

Judging from their inaction, Britannica's executives initially seemed to have viewed the CD-ROM encyclopaedia as an irrelevance, a child's toy, one step above video games. As revenues plunged, it became obvious that regardless of the quality, CDROM encyclopaedias were serious competition. Britannic executives reluctantly considered manufacturing their own CD-ROM product. Months passed, and sales continued to plummet. In response, the company eventually put together their own CDROM version of the encyclopaedia.

The CD-ROM version engendered yet another crises: a revolt by the sales force. Even if priced at a significant premium over its CD-ROM competitors such as Encarta, the CDROM version of Britannica could not possibly produce the $500 to $600 sales commission its traditional counterpart produced, and from which it would obviously detract sales. Indeed, a CD-ROM version would have demanded a completely different channel. To avoid a revolt by the sales force, Britannica executives decided to bundle the printed product with its digital counterpart. The CD-ROM was given free to buyers of the multivolume set. Anyone who wanted to buy just the CD-ROM would have to pay $1,000.00. The decision appeased the sales force briefly, but did nothing to stem the continuing collapse of sales. Losses mounted. In 1995, the Benton Foundation finally put the company up for sale. For nearly eighteen months, investment bankers tried to find a buyer. Microsoft declined, as did Technology Media and information companies. Finally, in 1996, financier Jacob Safra agreed to buy the company, paying less than half of the book value. In less then five years, one of the greatest brand names in the English-speaking world, with a heritage of more than 200 years, was nearly destroyed by a cheap, shiny litle disk.
Adapted from Evans and Wurste (1997, 2000).

2. *The BSC creates a statism* that tends to struggle with the challenges of a highly competitive and changing business world. Within the BSC approach, a centrally defined strategy is translated into certain measures that align all company activities to achieving these BSC goals. In consequence, the optimal implementation of a BSC leads to a high level of uniformity and goal orientation. This increases and possibly maximizes the focus on the given goal, but limits any further activities and initiatives that might go beyond the originally set targets. Statism therefore results in a high level of entropy, namely a high amount of energy that is not used within an organization. In such an aligned organization employees, for instance, might have a clear perception of their job, the achievements of BSC metrics for instance, but they will only do little more than achieving just these (Falk and Kosfeld, 2004).

Thus, the potential that resides within a company is reduced towards the achievement of a given and centrally defined BSC goal and towards this it is very efficient. However, the overall potential is not fully used. An individual as well as an organization is able to deploy its potential in many ways, of which the BSC metrics are just one aspect. The rest remains unused and the system or company as a whole therefore becomes inefficient because of underutilizing the potential energy that would be available beyond the mere targets of a BSC. Dynamism in contrast is open-ended and able to partly absorb the energy residing within a company or a system. In this way an organization can constantly rejuvenate in co-creative collaboration with others.

3. *The external innovative connectivity of an organization is hampered by the BSC,* which shows to be mostly an internal document thereby depicting a critical limitation in its ability to account for the external environment and systemic linkages. The BSC is a management and measurement tool that is primarily concerned with ”driving performance” and “translating strategy into action”, therefore promoting efficiency within an organization. It widely ignores the needs of an interlinked and highly networked innovation economy, in which companies co-evolve and where competition is partly giving way to coopetition. Companies are embedded into a network that consists of many other actors like suppliers, local community, alliance partners, unions, and the final customer, who seems to be the only one accounted for by the BSC.

Business is more and more based on networks of firms or so called business ecosystems in which successful firms, such as Microsoft, collaborate within their network and thereby improve their own performance significantly (Iansiti and Levien, 2004). Through the supply of tools and technologies, Microsoft allows other companies and partners to create programs that supplement its widely used operating system Windows. In turn, Microsoft benefits from a constant influx of new Windows applications. Many companies now connect to suppliers by providing real-time information about customers preferences and demand, which improves the speed of the entire system. This kind of open innovation (Chesbrough, 2003) is faster and relies on outside stakeholders as well. A necessary postulate however, is the dense network that supports the effective exchange of innovative ideas and knowledge.

The BSC is based on the view of the firm in relative isolation and adversarial in relationships with suppliers. Such limitations with regard to a systemic systems orientation become more

pronounced, the more a company has to deal with rapid and disruptive change as well as a networked environment such as in today's business world.

The four perspectives of the BSC are mainly focussed on a single organization and do not take the activities of the co-performing industry into account. Even though the customer perspective does take external actors into account, it remains focused on the individual company. More dramatically firms can be so interconnected with their environment that there is no need for them anymore to own the physical resources necessary for producing the product they sell. The most extreme example is the virtual organization (Chesbrough and Teece, 1996). In such a case the limitations of the current BSC approach become obvious, since the single company focus would not take sufficient account of these externalities that are vital to the firm. Moreover, as the cases of Vinfruco and Western Wines in the global wine industry (see box below) demonstrates, the company also needs to be aware of the system in which it is embedded in and its measurement system needs to reflect this view. The BSC in its systematic single company focused view is incapable of serving these newly evolving needs.

External focus and innovation in the Wine industry

Traditionally, the global wine industry was dominated by large wine producing companies, often vertically integrated with extensive wine farms (or farming members), large wine producing facilities, bottling and labeling plants, distribution facilities, and extensive marketing (including branding) activities. This situation was more prevalent in the 'New World' wine countries such as Australia, USA, Chile, and South Africa. But also in the 'Old World' wine countries such as France, Spain, Italy, and Germany, the focus was similarly on cultivation, production and quality, and geographic controls. The most important economic value was regarded as control of farm (grape) production, wine production capabilities and quality controls, and protection of origin-specific '*terroir*' image.

In the mid-1990s a new type of wine industry entrepreneur emerged, the so-called 'negociant', a Francophile word for 'merchant', but actually having a larger and more innovative content. These companies do not own any wine farms, do not own or operate any wine production activities, do not package wine, do not design wine labels or bottle any wine, and also do not own or operate any distribution facilities. However, what they do own are innovative and market-relevant brands, and their related sustaining capabilities. In the space of just ten years, some of these companies are selling more of their own wine brands than the leading traditional large wine producing companies. They are still regarded as 'upstarts' and a temporary phenomenon by some, but others have realized that in the global wine industry value (and income) has shifted irrevocably from the production side to the demand side. Consider two leading negociants in the South African wine industry, Vinfruco and Western Wines, who started in the mid-1990s. In the space of ten years their leading brands, viz. Arniston Bay and Kumala respectively, have become the top-selling South African brands in the United Kingdom, the world's largest wine importing market, outperforming the leading brands of traditional large South African wine companies such as Distell and KWV. An innovative new business model has now transcended the existing (traditional) business models in the wine industry.

Why and how did this happen? When speaking to the executives at Vinfruco and Western Wines, they reveal their focus on three core capabilities n particular: knowledge of customer needs and required benefits; innovative capability to co-design brands with key retailers in the market; and ensuring integrated and reliable supply and demand chains to deliver consistent customer value as promised in their brands. In essence, they focus on superior knowledge and brand innovation, realizing that this is where value now resides, and not in ownership of physical resources – the traditional economy view. Of course, this requires knowledge of customer trends, needs, and behavior, knowledge of wine farming (where, what, and how to source the right grapes, and ensuring supply), knowledge of wine production and quality levels, design of wine styles that are right for certain markets, co-design of wine labels, knowledge of wine packaging, knowledge of wine distribution and logistics, and knowledge of wine retailing and merchandising. But these capabilities (and value) reside in knowledge and innovation, not in physical resources. In the innovation economy, characterized by the predominant value of intangible resources, companies stuck in the traditional industry value parameters are likely to increasingly suffer if they do not adapt or extend their traditional business models.

In the global wine industry, the struggle for 'ownership' of prominent brands and their markets are evidenced by the increasing mergers and takeovers in 2003-2005, for example, Constellation Brands (BRL Hardy, Mondavi, Nobilo), Foster's (Wolf Blass, Beringer Blass), Gallo (Gallo, Ecco Domani), and Southcorp (Lindemans, Rosemount, Penfolds). Buying brands is one strategy, but the important issue is to energize and manage innovative capabilities for survival.

4. Another limitation of the BSC is yet the way it deals with knowledge creation, learning and growth. The BSC follows the traditional logic of innovation through internal R&D labs, which work on an innovation from its beginning to its end, keeping it secret from the external environment and especially from competitors. Kaplan and Norton's 2004 publication extends this concept throughout the company, but remains very much rooted in the framework set by the earlier concepts of the BSC. The nature of innovation is similarly changing from incremental towards more and more dynamic, from closed to open, meanwhile becoming increasingly networked. The tendency of companies "opening up" in various ways shows to be of growing significance. In the past, internal R&D departments were a very effective instrument for large corporations to innovate and at the same time keep competitors from entering the market. In the era of the knowledge economy the growing number and mobility of skilled employees as well as the improved accessibility of venture capital led from closed to open innovation (Chesbrough, 2003).

The difficulty, which is not limited to the BSC only, is to measure such distributed innovation. In times when innovation was limited to the R&D lab, evaluating the potential of a new idea was easier, because it addressed a known market with known customers and the source of the innovation was most likely the internal R&D lab. Companies would set a goal for the future to achieve and any technical development could be assessed by asking whether it serves this one goal. Innovation that comes from external sources and is applied outside known markets and customers, for reasons rapidly emerging change or just because a new market was

created, is much more difficult to evaluate. Constantly new information and opportunities might shift the perspectives on a new idea. Whether an innovation is applied in the best way possible is very difficult to know in such environments.

Innovation, a key factor to intellectual capital (IC) is viewed by the BSC as an internal business process and categorized under this perspective, appearing to be a routine process rather than a creative endeavour by skilled employees all over the company. Knowledge, learning and growth have become essential and good measurement systems need to acknowledge that innovation has to be practiced in all business areas. According to Bontis *et al*. (1999) the consequence of mechanistic BSC view of employees and innovation, is that difficulties of managing such aspects of corporate life, promoting dynamic innovation and knowledge creation are underestimated. The process of knowledge creation itself and across the company is not sufficiently accounted for within the BSC approach. Therefore, instead of creating a separate and isolated dimension called learning and growth as in the BSC, a systemic measurement tool in today's business environment needs to integrate a knowledge, learning and growth perspective through all dimensions of measurement.

5. The BSC is grounded in a mechanistic mindset. Companies with a bureaucratic and hierarchical structure, in which job responsibilities are still clearly defined and in which deviations from the standard and routine processes are treated as problems of temporary nature before going back to the norm, might very well benefit from a BSC that provides a systematic approach to measurement. However, as business processes become more complex, the understanding of most of the key success factors within a firm, especially today, needs to take a cross-perspective into account. In a knowledge driven company, simple cause-effect relationships are not sufficient anymore to understand complex relationships that the BSC tries to reduce to a linear one-way relationship. Customer satisfaction for instance might be linked to various factors such as employee satisfaction, quality, delivery time, and so on. However, customer satisfaction might also enhance employee satisfaction, which in turn might influence quality positively and so forth. Thus, the problem of how to link the indicators of the BSC is still unsolved (Andréasson and Svartling, 1999). The predominant mindset connected to the application of the BSC is that of a mechanistic and linear thinking, making it difficult to deal with an interconnected and networked world. The reality of today's business involves non-linear and interactive activities that consider the entire system, not only the direct and visible factors, but also those that reside even unseen within the environment in which they take place.

In summary, the BSC suffers from a remarkable tyrannical regime, based on invalid assumptions for the innovation economy, and providing dangerous limitations to its survival and value rejuvenation for its key stakeholders. As such it could easily operate as an instrument of domination, both internally and externally to the firm, in attempting to maintain the status quo and avoid change. The BSC is grounded on the traditional and mechanistic mindset. Its rigidity, statism, linear thinking, its conception of knowledge and innovation as a routine process and finally its focus on the single company render the BSC an insufficient tool for understanding and dealing with the innovation economy.

An alternative approach to the balanced scorecared: a systemic scorecard approach

The way corporate systemic performance is measured, differs fundamentally from traditional scorecards and their way of measuring against historic goals and objectives. Successful firms are defined by their ability to adapt to the changing business environment through co-evolution with the system. Businesses need to reassess their current situation continuously and in a much more timely manner than ever before. Systemic co-evolution of businesses make companies more and more interdependent.

Thus, an effective measurement and management tool in today's innovation economy needs to account for the socio-cultural system in which a company is embedded. Networked knowledge systems are becoming the point of measurement, extending traditional approaches focused on the single firm.

In order to expand the BSC by Kaplan and Norton (1992, 1996, 2000), we propose the concept on the systemic scorecard (SSC), first conceptualized by Leibold *et al*. (2002). Shifting the focus from the corporation towards the socio-cultural (and ecosystems) environment of the firm, the systemic scorecard extends the four dimensions of the BSC (financial, customer, business processes, learning and growth) towards an embedded systemic approach to measuring (see Table 2).

Table 2. An Alternative

Dimension	Balanced Scorecard Focus	Systemic Scorecard Focus
Financial	Improve organizational shareholder value	Improve network stakeholder value
Customer	Improve customer satisfaction and relations	Improve customer success and customer partnerships
Business Processes	Optimize particular internal business processes	Robustness and resilience of business network processes, both competitive and collaborative
Learning and growth	Continuous organizational learning and growth	Systemic knowledge management through all dimensions

Source: Leibold *et al*, 2002

In order to achieve this networked view, the SSC consists of four perspectives: customer value, systemic change and renewal, networked extended business processes, and stakeholder value. Within the *customer value perspective*, companies look at their capability to constantly provide new customer value. In contrast to the BSC, the main focus of this view should be shifted from the mere goal to deliver simply more value than others, to trying to co-create new value for customers in the business ecosystem. The creation of not only the same value in improved ways, but the ability to find ways in which value can be created differently on a regular basis is a decisive ability. By finding different ways to address customer needs new markets can be created and unrealized potential can be harnessed. It is a shift from delivering a better product in comparison to others to delivering a product that really addresses the needs of the customer, including those that the customer may not even know him- or herself yet. Customer knowledge management for instance can help to achieve such new and heightened customer value improvements. Amazon.com serves as an example of a firm that manages

customer knowledge successfully through customer book reviews, individual order histories and customized suggestions for other books. In another instance Netscape published the source code of its internet browser, externalizing development to an open source project, which challenges market leader Microsoft. profiting from its customers, Netscape then incorporated the knowledge and innovation gained from its open source software into the new Netscape version that is soon to re-enter the market with an improved product.

The *systemic knowledge and renewal dimension* is the extension of the innovation and learning perspective known from the BSC. In contrast to the internally focused learning and growth perspective of the BSC, this systemic dimension acknowledges the potential of the entire system. In order to track networked innovation processes in addition to "time to market" measures, to percent of (sales from) new products and other indicators, the systemic view should include all knowledge involved in the process of innovation. It needs to become a cross-section through all business areas that transcends the traditional focus on the R&D department. All knowledge in this case means that not only the financial outcomes of marketed products are measured, but that knowledge is assessed in all its developing stages, if possible from the surfacing of the idea to the death of a product or service that is finally taken from the market.

In the *networked extended business processes view*, companies focus on creating, maintaining and fostering business networks and their processes. Since today's business operations are not carried out anymore in a vacuum until the final product is delivered, but accompanied by constant stakeholder interaction, feedback and exchange, the former business processes perspective introduced by the BSC needs to be extended to include these networks, both competitive and collaborative. The evaluation of this view may take into account how many networks exist, their perceived potential and usefulness, as well as their quality, by reviewing members' experience and success within interviews or questionnaires.

The *stakeholder value perspective* gathers information about the financial and non-financial value added for stakeholders. The traditional shareholder value is subsumed into this view. As part of the business eco-system, the firm should also aim to get an insight into the value objectives of their stakeholders and whether these objectives are met. The community can be included into this view as well as employees, suppliers and other organizations. By closely keeping in touch with the co-evolving environment, firms can not only work more efficiently, but more effectively as well. Such collaborations as practiced by DaimlerChrysler and GM in entering the market of hybrid gas-electric automobiles together, joining forces in development, show the significance of such models even between competitors. In this case the two industry giants emphasized the gains in time-to-market and costs to face the competition by early-to-market leaders Toyota and Honda. The embeddedness into the socio-cultural system supports, instead of impedes, dynamic change initiatives to move the company forward. Moreover, it can be used as a tool for monitoring and making sense of the business environment. The knowledge gained here can respectively be used as valuable information for evaluating innovation, answering the question of whether to develop ideas into a product or rather externalize them.

Conclusion

The balanced scorecard has become a tyrannical concept and instrument that is rooted in 20th century economic paradigms. During the last decade, the basis of competition has changed fundamentally. A company's fate is increasingly tied to that of other firms that are part of its business eco-system. In the nature of our universe and evolvement of organisms, including the business organization, nothing remains the same and the BSC also, in due course, has become obsolete as a managerial concept and tool in the significantly changing environment of the early 21st century. The challenge is now for further research to apply and test more extensively the systemic scorecard in various industries and firm settings, and especially to determine if such an approach welfare of economy and society. Our world today, its global and local business practices, and the understanding of these through systemic, not analytical (or systematic) lenses only, have simply necessitated that we now seriously consider if the BSC has any value at all, if applied in its current format and with traditional assumptions.

References

Andréasson, M. and Svartling, A. (1999), "Knowledge Management Methods: Practical approaches to managing knowledge" in The Balanced Scorecard -A tool for managing knowledge?, Retrieved on: 18th April, 2005 from: http://www.handels.gu.se/epc/archive/00001973/01/Andreasson_1999_7.pdf

Ampuero, M., Goransson, J. And Scott, J. (1998), "Solving the measurement puzzle. How EVA and the balanced scorecard fit together", *Perspectives on business innovation*, no. 2, Ernst & Young Center for Business Innovation.

Beer, M. (2002), "Building Organizational Fitness," in S. Chowdhury (ed.), *Organizations 21C*, 311-330. New Jersey: Financial Times Prentice Hall.

Bontis, N., Dragonetti, N.C., Jacobsen, K. and Roos, G. (1999), "The knowledge toolbox: A review of the tools available to measure and manage intangible resources", *European Management Journal*, Vol. 17 No. 4, pp. 391-403.

Buckman, R. (2004), "*Building a Knowledge Driven Organization*", McGraw Hill, New York, NY.

Chesbrough, H.W. (2003), "The Era of open innovation", *MIT Sloan Management Review*, Spring, pp. 35-41.

Chesbrough, H.W. and Teece, D.J. (1996), "Organizing for Innovation: When Is Virtual Virtuous?", *Harvard Business Review*, January-February, pp. 65-74.

Christensen, C.M. and Raynor, M.E. (2003), "*The Innovator's Solution: Creating and Sustaining Successful Growth"*, Boston: Harvard Business School Press, 34.

Eccles, R.G. (1991), "The performance measurement manifesto", *Harvard Business Review*, January-February, pp. 131-137.

Evans, P.B. and Wurster, T.S. (1997), "Strategy and the New Economics of Information", *Harvard Business Review,* September-October, 71.

Evans, P.B. and Wurster, T.S. (2000), *"Blown to Bits",* Harvard Business School Press.

Falk, A. and Kosfeld, M. (2004), *"Distrust - The Hidden Cost of Control"*. CEPR Discussion Paper No. 4512. http://ssrn.com/abstract=590102

Gibbert, M., Leibold, M. and Probst, G. (2002), "Five Styles of Customer Knowledge Mangement, and How Smart Companies Use Them To Create Value", *European Management Journal*, Vol. 20 No. 5, pp. 459-469.

Hamel, G. (1998), "The challenge today: changing the rules of the game", *Business Strategy Review*, Vol. 9 No 2, pp. 19-27.

Hauser, J.R. and Katz, G.M. (1998), Metrics: You are what you measure!, *European Management Journal*, Vol. 16 No. 5, pp. 517-528.

Iansiti, M. and Levien, R. (2004), "*The keystone advantage : what the new dynamics of business ecosystems mean for strategy, innovation, and sustainability"*, Harvard Business School Press, Boston.

Kaplan, R.S. and Norton, D.P. (1992), "The balanced scorecard – Measures that drive performance", *Harvard Business Review*, Vol. 70, No. 1, pp.71-85.

Kaplan, R.S. and Norton, D.P. (1996), "*The balanced scorecard: Translating strategy into action*", Harvard Business School Press, Boston, MA.

Kaplan, R.S. and Norton, D.P. (2000), "Having Trouble with Your Strategy? Then Map It", *Harvard Business Review,* September-October, 167-176

Kaplan, R.S. and Norton, D.P. (2004), "Measuring the Strategic Readiness of Intangible Assets", *Harvard Business Review*, January-February, pp. 52-63

Kim, W.C. and Mauborgne, R. (1999), "Strategy, Value Innovation, and the Knowledge Economy", *Sloan Management Review*, 40(3), 41-54.

Kim, W.C. and Mauborgne, R. (2004), "Blue Ocean Strategy", *Harvard Business Review*, Vol. 82 No. 10, pp. 76-84.

Kim, W.C. and Mauborgne, R. (2004), "Value Innovation: the Strategic Logic of High Growth", *Harvard Business Review*, 82(7/8), 172-180.

Leibold, M., Probst, G. and Gibbert, M. (2002), "*Strategic Management in the Knowledge Economy"*, Wiley, New York.

Moore, G.E. (1965), "Cramming More Components onto Integrated Circuits," Electronics, Vol. 38, No. 8, 114-117.

Parker, L.D. (1979), "Divisional performance measurement: Beyond an exclusive profit test", *Accounting and Business Research*, Autumn, pp. 309-319.

Quinn, J. B. (1992), "*Intelligent Enterprise: A Knowledge and Service Based Paradigm for Industry"*, Free Press, New York.

Roos, J., Roos, G., Dragonetti, N.C. and Edvinsson, L. (1997), "*Intellectual Capital: Navigating in the New Business Landscape"*, Macmillan, Houndsmills, Basingtoke.

Roos, J. and Victor, B. (1999), “Towards a New Model of Strategy-Making as Serious Play”, *European Management Journal*, 17(4), 348-355.

Russ, R. (2001), “Economic value added: Theory, evidence, a missing link”, *Review of Business*, Vol. 22 No. 1, pp.66-71.

Vargo, S.L. and Lusch, R.F. (2004), “Evolving to a New Dominant Logic for Marketing”, *Journal of Marketing,* 68(1), 1-17.