

# TRADITIONAL BALANCED SCORECARD AND MODERN TIMES CHALLENGES

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## **Abstract**

The Balanced scorecard (BSC) which was developed in the industrial age as performance measurement and strategic management tool remained very useful and relevant till 1990s. However, developments in modern times, characterized by the fast transition from the industrial economy to the interlinked and highly networked innovation economy as facilitated by business globalization, are proving that performance measurement that worked in the past are not so effective in this new age. This paper reviews the key limitations of BSC that threatens its relevance in the dynamic net-worked world of innovation economy of the 21st century. The paper concludes that the traditional BSC as previously designed has become obsolete and irrelevant as a management and strategic performance measurement in the innovation economy of the 21st century and recommends the development of modern BSC that incorporates characteristics of the innovation economy and industry-specific success factors as bases of measurement.

The balanced scorecard (BSC) was developed as an innovative performance measurement tool. For more than ten years, the BSC met with very enthusiastic acceptance in both business and academic circles. Many of the worlds leading organizations claim that balanced scorecard techniques give them an edge in objectively quantifying, tracking, and managing business performance." BSC gained prominence and relevance more during the industrial age. However, following the transition from the industrial to the innovation economy, companies soon began to find that performance measurement systems like the BSC that worked in the purely industrial age of the 1990's are fast becoming ineffective and increasingly irrelevant in the modern age. These developments have brought the continuous relevance of BSC to the centre stage of academic and professional discuss. This article, through in-depth literature review, highlights the challenges and limitations of BSC applications that have made it increasingly irrelevant in today's innovative economy. Some specific problem areas were identified and discussed, including suggested alternatives to the BSC with appropriate conclusion and recommendations.

- 1. Concepts of Industrial Economy and Innovation Economy**  
**Industrial economy:** This is characterized by manufacturing, making goods of all kinds, especially textiles, iron goods, metal wares and pottery, for both overseas and domestic markets. It represents an age where wealth-

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creating work and productive capacity were essentially through mechanized processes. Industrial economy is a product of the industrial revolution of the late eighteenth and early nineteenth century which represented an unprecedented shift from agriculturally based economy.

2. Innovation Economy: This represent the age of information revolution in which knowledge is the primary source of value. It is characterized by, convergence and integration of communication and processing technologies into information technology (IT), pervasive influence of IT on economic activity such that most workers are information workers and most products are information products, and the application of IT networks throughout the economic institutions, organizations, and processes resulting in a very high degree flexibility, and acceleration of globalization. This is in sharp contrast to industrial-era economies, in which ownership of physical or intellectual property stems from its development by a single enterprise.

### **Brief History of BSC**

The first balanced scorecard was created by Art Schneiderman in 1987 at Analog Devices. Art Schneiderman participated in an unrelated research study in 1990 led by Dr. Robert S. Kaplan in conjunction with US management consultancy Nolan-Norton, and during this study described his work on Balanced Scorecard. Subsequently, Kaplan and David P. Norton included anonymous details of this use of balanced scorecard in their 1992 article on Balanced Scorecard. (Mansel 1992). Kaplan and Norton's article became the most popular among the papers published, was a popular success, and was quickly followed by a second in 1993. In 1996, they published their first book, *The Balanced Scorecard*. The articles and the first book spread knowledge of the concept of Balanced Scorecard widely, and perhaps wrongly led to Kaplan and Norton to be credited with the creation of the Balanced Scorecard concept instead of Art Schneiderman who actually coined the terminology.

### **Original Design Method**

The BSC is designed to systematically measure the company in the following four areas: 1). The financial perspective; 2). The customer perspective;3).The internal business perspective and 4. the innovation and learning perspective.

The financial perspective uses traditional accounting measures in order to evaluate a firm's short-term financial results. The customer perspective measure relates to customer satisfaction, new customer acquisition, customer profitability and market and account share in tested market, (Brewer and Spoh 2000). The internal perspective view is based on the concept of the (internal company) value chain, including the process (or steps) or the critical new

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internal processes which the company executives must excel in order to achieve and sustain growth and success. (Ibid: 62-63).

The fourth and final dimension comprises the Innovation and learning/learning and growth perspective that is inherent in the company. This perspective centers on using people, systems and procedures to ensure that they are technologically capable of meeting their own internal processes and meeting customers long term needs for the future. This perspective identifies in what infrastructure the company must invest in today to be prepared to compete globally in the future. By these four measures, Kaplan and Newton attempted to establish BSC as a representation of an organisation’s shared vision. This makes the BSC a combined instrument for measurement as well as tool for strategic management. By clarifying the company’s 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.(Ibid). 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. This makes the involvement of top management imperative if the BSC is to work. In their 2000 publication (Kaplan and Norton, 2000), Kaplan and Norton used 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. Furthermore, Kaplan and Norton in 2004 similarly built upon the earlier concept of the BSC, including the measurement of intangible assets. These extensions of the BSC are however also limited by five major problem categories of the origin BSC.

**Table 1: The Four Perspectives in a Balance Score**

<b>Customer perspective</b>	<b>Financial perspective(shareholders’ view)</b>
Mission: to achieve our vision by value to our customers	Mission:to succeed financially, by delivering value to our shareholders
<b>Internal perspective(process-base view)</b> Mission to satisfy shareholders and customers by promoting efficiency and effectiveness in our processes	<b>Learning and growth perspective(future view)</b> Mission to achieve our vision by sustaining our innovation and change capabilities, through continuous improvement and preparation for future challenges

source: Kaplan and Norton(1996:74)

**Variants, alternatives and criticisms**

Since the Balanced Scorecard was popularized in the early 1990s, a large number of alternatives to the original 'four box' Balanced Scorecard promoted by

Kaplan and Norton (2000) in their various articles and books have emerged. Most have very limited application, and are typically proposed either by academics as vehicles for promoting other agendas (such as green issues), Brigarie (2002) or consultants as an attempt at differentiation to promote sales of books and / or consultancy.

Many of the variations proposed are broadly similar. Cobbold, and Lawrie, (2002a), attempted to identify a pattern in these variations - noting three distinct types of variation. The variations appeared to be part of an evolution of the Balanced Scorecard concept, and so the paper refers to these distinct types as "Generations". Broadly, the original 'measures in boxes' type design proposed by Kaplan & Norton,(2000) constitutes the first Generation Balanced Scorecard design; Balanced Scorecard designs that include a 'strategy map' or strategic linkage model' (e.g. the Performance Prism, later Kaplan & Norton designs, Kaplan R.S. and Norton D.P. (2000), the Performance Driver model of Olve & Wetter Olve ,Roy and Wetter M. (1999) constitute the 2nd Generation of Balanced Scorecard design; and designs that augment the strategy map / strategic linkage model with a separate document describing the long-term outcomes sought from the strategy (the "Destination Statement" idea) comprise the 3rd Generation Balanced Scorecard design.

### **Transitional Economy and Business Performance Measurement**

Most of the performance measures used by firms before the development of BSC were traditional cost-based and financial statistics reported to Internal Revenue/Tax Services and to shareholders in the form of annual report, balance sheet and income statement data. These systems were perfectly suited in the industrial era, but ill-equipped to capture the value creating mechanisms of today's modern business organization). While the methods of modern business have transformed dramatically over the past decades, the systems of measurement had remained firmly mired in the past. (Niven,2002). Measurement is considered a prerequisite to management, (Martinson, Daison, Tse, 1998). As Richard Quinn, Vice President of Quality at Sears, has observed, "You simply can't manage anything you can't measure" (Lingle & Schiemann, 1996:61). The growing trend towards seeking better measurement systems by companies, (Birchard 1995, and Kurtzman,1997) and their shared concern over measurement systems that focus on the wrong aspects of performance that undermine the organisation's strategic mission by perpetuating short-sighted business practices, (Hoffecker & Goldenberg,1994) made BSC a welcome development.

With a shift from the industrial economy towards an economy that is predominantly characterized by intangible assets, such as knowledge and innovative capability, organizations have to manage increasing levels of complexity, mobility and uncertainty. Voepel, Leibold, Eckhoff. and Davenport (2005). The ability to manage knowledge-based intellect became

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of critical importance in the new business environment (Quinn, 1992). The evolving of the fast globally networked society, as facilitated by Information and Communication Technology ICT, changed the world into a global village that constantly undergoes dynamic and socio-cultural changes causing an increase in organizational connectivity and innovation. (Leibold, Probst and Gibbert,2002).

**Figure 1. From the Industrial Economy to the Innovation Economy**

<b>Industrial Economy</b>	<b>Innovation Economy</b>
1. Cost saving through vertical integration-Customer visits location/inspect standardized goods. Clear distinction between producers of content	Flexibility through outsourcing Choice by on-line description and customized goods  All firms become content firms
2. Market infrastructure constrains quick changes	Market infrastructure enables quick changes.
3. Limited choices through predetermined channels Business based on integrated value network	Many choices through multiple Channels Business based on differentiated content and added value.
4. Physical resources and decreasing returns	Intangible resources and increasing returns.

Source: Adapted from: Voepel, Leibold, Eckhoff, and Davenport (2005).

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

Competition in the innovation economy is 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. 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 (Voepel, Leibold, Eckhoff and Davenport 2005). All of the traditional business performance measures (or scorecards) such as the shareholder value, market share, human resource accounting, economic value-added, intellectual capital indices, and

knowledge management scorecards suffer to some extent due to underlying and increasingly invalid assumptions rooted in the industrial economy.

### **Innovation Economy and the Changing Premises and Mindset**

In the innovation economy as well as industrial economy, the core truths of business and strategy apply- in both businesses must create value for customers and capture some of the values (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 21<sup>st</sup> century will never again be the same as it was in the 20<sup>th</sup> century – the rules of the innovation economy have made a – seemingly sudden – transition from a state of continuity to a state of discontinuity. (Voepel Leibold, Eckhoff and Davenport,2005). Besides the significant shifts in managerial mindsets during the 20<sup>th</sup> century, as indicated in Figure 3 above, the great shock in the late 20<sup>th</sup> and early 21<sup>st</sup> century is that systems cannot be fully understood by previously known theories.

The analytical mindset typical of most of the 20<sup>th</sup> 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. However, both Hamel (1998), and Roos and Victor (1999) call for a new theory of strategy management that would enable the development of 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, 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, (Voepel, Voepel Leibold, Eckhoff and Davenport 2005); as illustrated in Table2.

**Table 2. Contrasting a Conventional Mindset with a Value Innovation Mindset**

<b>Key elements of strategy Mindset</b>	<b>Conventional Mindset (Goods-Centered logic Dominant)</b>	<b>Value Innovation Mindset Value/Service-Centered Dominant Logic)</b>
<b>Industry Assumptions</b>	Industry's conditions are given	Industry conditions can be shaped
<b>Goods</b>	People exchange for goods i.e. effects from operand resources	People exchange for value/service, i.e effects from operant resources.
<b>Customers</b>	Reciepoint of goods market segments and group needs	Co-producers of value/service; individual profiles and custom needs.
<b>Value</b>	Embedded in the operand resources, determined by the producers	Leveraging current and potential capabilities of networks.
<b>Capabilities</b>	Leveraging current capabilities of a company	Reinvent value to shift the competitive base
<b>Boundaries</b>	Fixed static company and market boundaries, close systems.	Flexible,dynamic company market and network connections;open systems
<b>Innovation</b>	Incremental (product, processes, company etc.)	Destructive (value, business model, processed) Open, shared; Focus on external & Systems & Functions (internal &closed, protected.

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

**Review of the Implications of Balanced Scorecard in the Innovation Economy:** When applied in the new innovation economy, the BSC displays significant limitations in dealing with the new, rapidly changing and networked corporate environment.The five specific disadvantages of the BSC as identified by Voeipel, Leiboid ,Eckhoff and Davenport (2005), are as discussed below:

**The BSC as a Rigid Measurement Tool:** The four perspectives are the main categories, to which key success factors are defined. Consequently, the BSC tends to force indicators into one of the four perspectives. By doing so, it limits the view on the company, and leaves little room for cross-perspectives that might have a simultaneous impact on the company. (Ibid). The perspectives that do not fit or cannot be categorized within the given framework of the four dimensions are in danger of being neglected. While Kaplan and Norton stated that these categories should not become a straitjacket, but still treat them as an all encompassing view of possible measures (Bontis, Dragonetti, Jacobsen, and Roos,1999). This draws managerial attention from other possible categorizations and views that might provide a better picture of the business system. Moreover, BSC might enable managers only to see what they want to see (or measure), while ignoring 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 Encyclopedia Britannica, which was locked into its traditional key success factors derived from the BSC, and nearly went out of business. (Evans, and Wurster, 1997 , 2000).

**The BSC Creation of Statism:** 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, Ibid. 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 set goals and none other. (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. 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.

### **BSC Hampering of External Innovative Connectivity of an Organization**

The Balance scorecard *is* mostly an internal document, thereby depicting a limitation in its ability to account for the external environment and systemic linkages. 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 for instance, allows other companies and partners to create programme



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that supplement its widely used windows operating system. 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.

The four perspectives of the BSC are mainly focused 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 factors 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. The BSC in its systematic single company focused view is incapable of serving these newly evolving needs.

**BSC Handling of Knowledge Creation, Learning and Growth:** The BSC follows the traditional logic of innovation through internal Research and Development laboratories, which work on an innovation from its beginning to its end, keeping its secret from the external environment and especially from competitors. Kaplan and Norton (2004) noted that this concept extends 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. 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.

Innovation, a key factor to intellectual capital (IC) is viewed by the BSC as an internal business process categorized under this perspective, appearing to be a routine process rather than a creative endeavor by skilled employees all over the company. 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.

**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 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 any more 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.

**An Alternative Approach to the Balanced Scorecard: A Systemic Scorecard Approach** The way corporate systemic performance is measured, differs fundamentally from traditional scorecards and their way of measuring is 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. (Voepel, Leiboid, Eckhoff and Davenport 2005). Businesses need to reassess their current situation continuously and in a much timelier manner than ever before. Systemic co-evolution of businesses makes 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), Voepel, et al. 2005, 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 to Balance Scorecard.**

<b>Dimension</b>	<b>Balanced Scorecard Focus</b>	<b>Systemic Scorecard Focus</b>
<b>Financial</b>	Improve organizational shareholder value	Improve network stakeholder value
<b>Customer</b>	Improve customer satisfaction and relations	Improve customer success and customer partnerships
<b>Business Processes</b>	Optimize particular internal business processes	Robustness and resilience of business network processes, both competitive and collaborative
<b>Learning and growth</b>	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 should 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 himself or herself yet.

### **Conclusion**

The balanced scorecard is a concept and instrument that is rooted in 20<sup>th</sup> 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 and irrelevant as a management and strategic performance measurement concept and tool in the dynamic networked world of innovation economy of the 21st century.

### **Recommendation**

Modern times, with its global and local business practices, require the re-examination of the continuing relevance of the BSC in its current format and traditional assumptions.

Further researches are recommended for the development of BSC that incorporates innovation economy and industry-specific success factors as bases of measurement, in addition to testing more extensively, the systemic scorecard in various industries and firms, to determine if such an approach improves better the welfare of economy and society.

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