

Employing the Balanced Scorecard for the Online Media Business

A Conceptual Framework

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Abstract: The new performance measurement system Balanced Scorecard tries to overcome drawbacks of traditional financial measurement systems by focusing on a company's individual strategies. These strategies derive from critical success factors. In the media sector, general critical success factors can be analysed, building a basis for deriving specific company strategies and measures. By analysing market forces and company resources, the factors Critical Mass, Customer Relations, Cooperations, Innovation, Leading Technologies, Competent Employees and Optimised Processes are found and – based on these factors – reasonable measures are elaborated. In combination with financial measures these build a generic model for individual Balanced Scorecards in the online media sector, helping companies to streamline the process of a Balanced Scorecard implementation.

1. INTRODUCTION

The media sector is one of the industries evolving most quickly at present and especially online companies develop wide varieties of business models and e-commerce strategies. Yet many companies neglect the elaborate implementation of these strategies as they focus on operational activities and omit the measurement of factors which are most critical for their success – possibly because they don't even know them. The paper on hand presents general critical success factors of online media companies as a basis for the implementation of a Balanced Scorecard – a management system which helps to implement strategies and measure business performance by analysing a company from different perspectives and not only focussing on financials. This paper develops a generic model for the design of individual Balanced Scorecards for online media companies. So far, a company has

to extensively analyse its strategies and success factors prior to the implementation of a Balanced Scorecard. Using a generic model as a guideline, this process can be streamlined.

The underlying methodology is based on the theoretical analysis of market forces and internal resources of online companies. These are combined to a set of critical success factors, relevant to this specific type of companies. Further on, typical measures for these success factors build a framework which a company can adapt. The background of this analysis was a cooperation project with three online media companies which have developed individual Balanced Scorecards based on this model.

2. BASIC CONSIDERATIONS

2.1 The Balanced Scorecard

Apparent drawbacks of traditional performance measurement systems built the starting point for a research project, carried out in the early nineties by Robert S. Kaplan and David P. Norton with twelve US-companies (Kaplan/Norton, 1997). It was targeted on overcoming the disadvantages of measurement systems based solely on financial figures and ex post information, e.g. the DuPont-System (Horvath, 1991). Due to their concentration on financial “hard facts” these systems neglect factors with ample influence on business performance – so called “soft facts” – like customer satisfaction or employee fluctuation. Though they can hardly be expressed mathematically exact, soft facts carry a big stake in analysing the condition of a company. So it was found by Ernst & Young, that an investor’s decisions are based to 35% on non-financial figures (Low/Siesfield, 2000).

The basic outcome of the research project was the Balanced Scorecard – a system which completes existing financial measurement schemes with non-financial indicators of a company’s past and future performance. Altogether the system combines monetary and non-monetary, internal and external as well as short- and long term indicators what makes it “balanced”.

The Balanced Scorecard approach pursues two main purposes. First, the implementation of strategies – from the management level through the hierarchy as far as the conversion into operational action – is supported by a continuous process of formulating, communicating, implementing and adapting strategies. Second, the acquisition and presentation of information, thus the effectiveness and quality of decision making, is enhanced by the design of the Balanced Scorecard – as a balanced key figure system. So the Balanced Scorecard consists of a Management- as well as a Measurement System (Weber/Schäffer, 1998) and can be seen in the aspects of strategy implementation and performance measurement.

The authors of the Balanced Scorecard have split the measurement system into several perspectives representing the main stakeholders of a company, especially shareholders (financial perspective), customers (customer perspective) and employees (learning and growth perspective) (Kaplan/Norton, 1997). A perspective of internal processes was added to represent most important business processes. Figure 1 depicts this generic system.

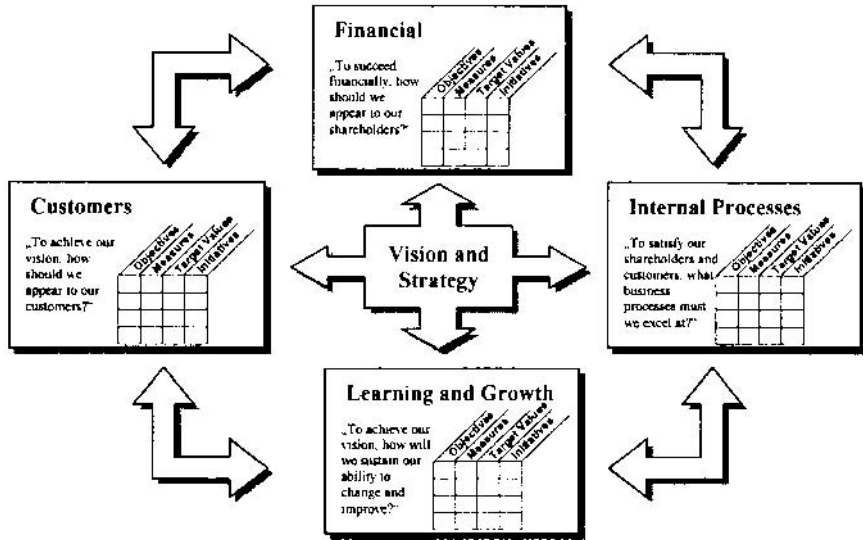


Figure 1. The generic Balanced Scorecard System (Kaplan/Norton, 1997).

Each perspective comprises a number of critical success factors expressed by business objectives for which measures are defined. Target values are assigned to each measure and initiatives are specified which are planned to be taken in order to reach the objectives. Additionally an objective can be associated with a specific person who bears the corresponding responsibility. In companies with considerable hierarchies, the measurement system can be distributed top-down through these hierarchies, reproducing the system on each level in the company and fractionising targets relevant to each success factor. This ensures the implementation of the company's strategies on each hierarchical level.

It is to be highlighted, that the Balanced Scorecard perspectives are not independent from one another – they show cause-and-effect relationships (Kaplan/Norton, 1997), which means that a changing measure in one perspective affects or can affect other measures in other perspectives. For instance the financial yield of a company can be affected by a change in customer satisfaction.

2.2 Business models of the online media sector

In order to derive particularities of the Balanced Scorecard in online companies, general characteristics of the media sector will be discussed in the following and an overview of relevant business models will be given.

Media products can be classified according to the technology primarily used for distributing content. Killius/Mueller-Oerlinghausen (1999) define print-, broadcasting- and online media whereas Hacker (1999) classifies the fields of print-, electronic-, broadcasting- and pre-recorded media in more detail. Further on these fields can be broken down into sub-sectors – e.g. newspapers, journals and books in the field of print media – whereas the field of electronic media splits into offline and online. In the following this paper will focus on the latter one – on online media which distinguishes itself from offline media by having a permanent connection to a service provider, such as online streaming music in comparison to offline CD music.

According to the generic value chain, which consists of investment, production, sales, billing and consumption (Zerdick et al., 2000), figure 2 shows value adding levels which can be identified for media companies (Hacker, 1999):

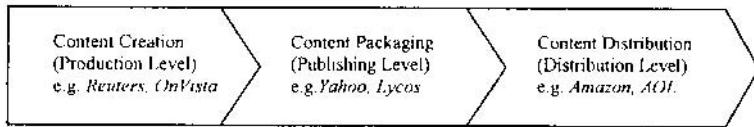


Figure 2. Media value chain

Besides continuous changes in these value chain elements of typical media production, even traditional value chain elements of the trading sector are affected by developments in the media branch. Especially in the field of distribution a desintermediation and virtualisation of wholesale- and retail levels takes place, transferring these levels partly or completely into the online-sector.

The performance measurement of a company depends largely on its business objectives which in the media branch can be of economic as well as of arty and publicity nature. In the following – for building the basis for a Balanced Scorecard framework – only companies with focus on economic objectives will be taken into consideration ³⁶.

A business model describes the characteristics of a company and comprises the questions “What is being sold to whom?”, “Which input is being acquired from whom” and “How is the production process to be designed?”. The main focus for

³⁶ Which does not mean that the Balanced Scorecard is not suitable for arty-focused companies, but sticking to the generic model, a Balanced Scorecard has an economic focus.

online business models lies in the underlying revenue model, which is – in comparison to traditional media business models – often the real innovation.

Media business models in general can be categorised according to the level of the value chain they are operating in. Thus there exist companies which create, package or distribute content. Schumann/Hess (2000) classify online business models into *Content Provider*, *Broker* and *Service Provider*.

Content Providers produce genuine content or product supplements, brokers are portals or aggregators who categorise and structure offers of content- and service providers. The latter model in the form of virtual communities is described by Hagel/Armstrong (1997) as the central element of the online business landscape of the future. Finally, service providers deliver the infrastructure, the physical and logical components which enable online business.

The revenue model of online companies often covers a combination of different revenue sources. These are defined by Zerdick et al. (2000) as *advertising*, *subsidisation via state*, *subscription/fees* as well as *transaction charges*.

3. IMPLICATIONS FOR A BALANCED SCORECARD IN ONLINE COMPANIES

The methodology of deriving a Balanced Scorecard for the online business can comprise two basic steps – according to the generic procedure described by Kaplan/Norton (1997). First, specific critical success factors of the online business shall be derived by analysing general market forces as well as primary company resources in the online sector and the illustrated business models. Based on these factors, typical perspectives, indicators and key figures will be compiled as shown in Figure 3.

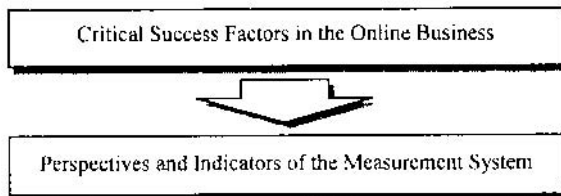


Figure 3. Basic steps for deriving Balanced Scorecards

This procedure reflects the main steps in the general implementation process of a Balanced Scorecard.

3.1 Critical success factors of the online business as a starting point

A company's critical success factors can be derived by analysing the company from market-based (external) and resource-based (internal) aspects (For the resource based view see (Wernerfelt, 1984), for the aspects mentioned see (Schumann/Hess, 2000), also (Böhning-Spohr/Hess, 2000)). On one hand, the environment of a company – i.e. the market – comprises a number of factors which the company has to align its strategies with – in a specific way according to the company's branch. On the other hand, a company owns internal resources it can use to gain competitive advantage. These two aspects will now be discussed referring to online companies.

3.1.1 The market based view

The market-based aspect consolidates in Porter's five market-forces, which are *Industry competitors*, *New market entrants*, *Buyers*, *Suppliers* and *Substitute products*, shown in Figure 4 – with examples for the online business and arrows depicting the specific strength of these forces.

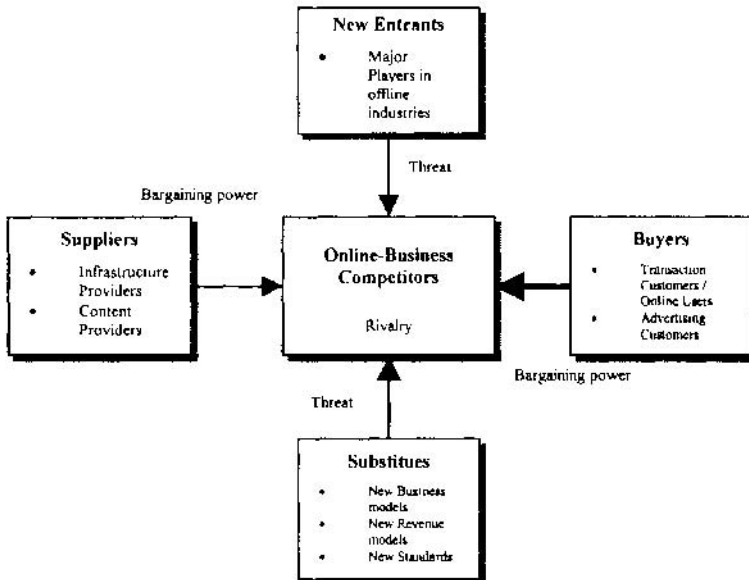


Figure 4. Porter's Five Forces in the online business (Porter, 1980)

Rivalry in the online business. Rivalry of incumbents in the online business is slightly different in the business models of Content Providers, Brokers and Service Providers. Where the first mainly face competition in the advertising market, the latter one primarily concentrates on consumers looking for internet access and online transactions. In the advertising market, size and quality of a company's user basis is

crucial for success. Therefore it is important to bind a big part of the online-time of most of the users, i.e. to win a “Share of mind” and collect information about them, which is valuable for advertising customers. For that reason, establishing a strong brand is of central significance (Manning, 2000), often ending in heavy brand competition among a few big players (Hagel/Amstrong, 1997). Thus, quality, success and costs of marketing are of major importance for Content Providers and Brokers.

In contrast, the transaction- and access-market, characterised by homogeneous services³⁷, is focused on satisfying and locking in customers by means of outstanding service as well as optimisation of processes and – as a consequence thereof – the reduction of costs, since rivalry in the homogeneous access-market embodies in price battles. Additionally, sheer size in respect of economies of scale matters in this market too.

New entrants. Due to high marketing expenses and long cash-to-cash cycles³⁸, new entrants need huge cash backing to become real competitors for established players. Therefore the rivalry strategies mentioned above serve as entry barriers too. On the other hand, technological barriers are rather small, because hardware is getting cheaper and online-businesses can be put up within shortest time. Incumbents can face this danger with own innovations and investment, trying to stay ahead in technological advance. Beyond that, the business models of online companies and its components can be copied very easily. Entry barriers in this field can be built by patents (Laidlaw, 2000).

Substitutes. Since new products are developed at high speed in the online business, the threat of substitutes is relatively high (Laidlaw, 2000). Content Providers and Brokers mainly face intangible “products” like new business- or revenue models, whereas Service Providers confront material products like network components or software programs. New developments and new standards – emerging quickly due to the high transparency in the online market – cannot be inhibited. So established companies have to recognise and follow new trends in order to use them for themselves³⁹. Here, a company’s ability to innovate and its financial strength are crucial – especially because the speed of developing and offering new products is essential.

Suppliers. Infrastructure- and content providers are the major groups of suppliers in the online business. Their bargaining power is highly correlated to the individuality of their products. Therefore, standardisation is a way to limit the power

³⁷ So are the services of call by call internet providers and online retailers not highly differentiated among competitors.

³⁸ The cash-to-cash cycle measures the time from the initial cash outflow to the time when cash is received from customers. As for the term, see Kaplan/Norton (1997), pp. 56.

³⁹ An example is given by the music industry, when music labels were mistaken trying to prevent the usage of MP3 files for the distribution of music.

of suppliers, although too much standardisation can have the adverse effect of reducing own individuality in respect of the customers.

Buyers. The online market shows high transparency and low switching costs for customers. In addition to standard offerings they require surplus value and services tailored to their specific needs instead of mass products. The need to offer additional value forces companies to cooperate with others, especially if this additional value cannot be created using the company's core competencies. So called "Lock In" strategies try to prevent customers from switching. A customer is locked in when the effort of switching is higher than the possible profit. Thus, companies raise this effort by customising services ("mass customisation") and differentiating their offers, so that customers – once used to the specific offerings of a company and having defined their user profile – are less likely to switch to rivals.

Summarising the factors discussed so far, four general market based critical success factors, significant for all the three online business models, can be outlined: the achievement of a *critical mass*, entering into *cooperations*, developing *innovations* and strengthening *customer relations*.

3.1.2 The resource based view

According to PORTER, the origins of competitive advantage are the competencies that firms possess (Porter, 1991), which are embodied in a firms resources. Prahalad/Hamel (1990) state that core competencies provide potential access to a wide variety of markets, they make a significant contribution to the perceived customer benefits of the products and they are difficult for competitors to imitate.

Two crucial resources for online companies – which can hardly be substituted or imitated – are employees and information systems (Schuhmann/Haess, 2000).

Creative employees provide the intellectual capital of a company (Brinker, 2000), thus lay the basis for its success. They create content for content providers, package content for brokers and take care of information systems for service providers. Employees are to be acquired and retained⁴⁰ – two requirements for human resource management which have to be taken into consideration when designing the employee perspective of a Balanced Scorecard.

Information systems for two reasons (Hasan/Tibbits, 2000) have a special relation to the Balanced Scorecard. First, information systems are widely used for implementing this performance measurement system. Second, technology mostly is so important for online companies, that it has to have special emphasis in the Balanced Scorecard system.⁴¹ If online companies neglect IT strategies, they won't

⁴⁰ This is particularly important on the IT labour market, where specialists are rare. See Boyd (2000).

⁴¹ For that reason even dedicated IT Scorecards have been developed. See Van Grembergen/Van Bruggen (2000).

have a chance in competing with rivals in the long term. Reasonable alternatives are: leading the market with own innovations and products, or following the market by adopting a leading rival's technology (see Götze/Mikus, 1999).

Besides that, internal business processes can be seen as critical success factors too, although they strongly depend on the ability of work force and information systems. Business processes are assessed by analysing their quality (i.e. error rate) and speed (in online business models expressed by the period between starting and finishing a transaction) as well as the costs they bring about.

The resource based success factors of online companies can be subsumed to *competent employees, leading technologies and optimised processes*.

Figure 5 shows a synopsis of the seven general success factors defined.

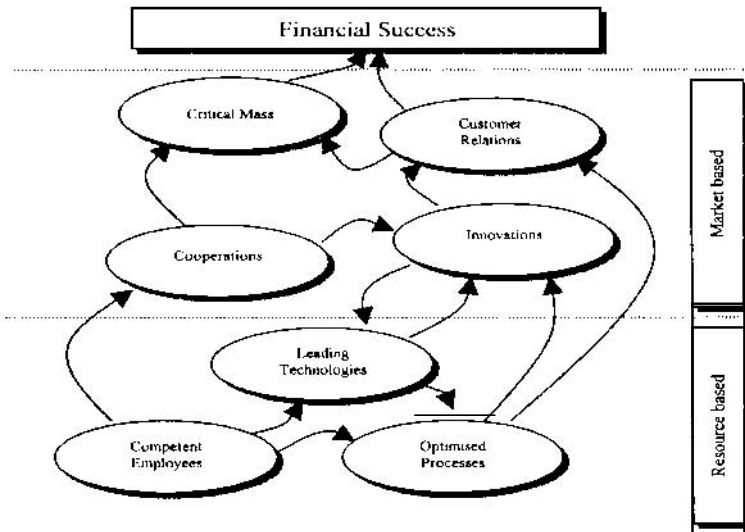


Figure 5. Critical success factors of online business models and their relations

As Figure 6 illustrates, critical success factors are not independent from one another, but show cause-and-effect relationships which are hardly to be quantified and which in this paper will not be analysed in detail. Generally they are an important subject of discussion when a Balanced Scorecard is developed. On top of this cause-and-effect chain the financial success depicts the topmost performance indicator.

3.2 Deduction of indicators and perspectives of the Balanced Scorecard

After having defined general critical success factors, a selection of indicators for these factors will be compiled and reasonable assignments of these indicators to perspectives will be discussed as shown in Figure 6.

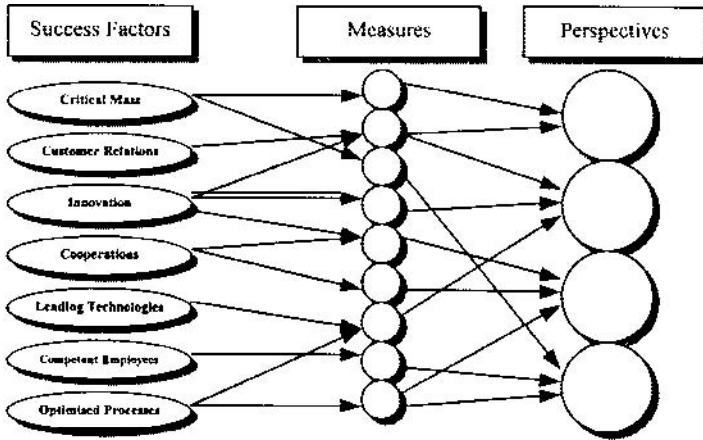


Figure 6. Assignment of measures to success factors and aggregation to perspectives

Critical Mass. The critical mass is the number of users/ consumers or the turnover/ market share of an online company which is necessary for the company to survive and grow out of own means. Intuitive growth indicators are the *number of customers/ consumers*, the *turnover* and *market share* as well as the growth rates of these. Marketing – necessary for reaching the critical mass – can be analysed by a broad range of measures in the fields of customer acquisition and -retention; like *conversion rate*, *turnover with new customers* or *number of return buyers*; as well as measures for website activity.

Customer Relations. Individualisation, already common for customers of B2B-business models, is coming up in B2C too. The intensity of customer relations is growing in both models and the need of measuring them differently is vanishing. *Customer satisfaction* is a core measure. It is created by services tailored to customer needs, presuming an extensive *knowledge* about their characteristics. Other measures for customer satisfaction are the *rate of returning customers*, *customer turnover* and *number of complaints*. A *customer satisfaction index* can be built of these factors. *Customer lock in* and *profitability* indicate a customer's value for the company and, especially in B2B-models, the *number of individual services delivered* and the *number of customer contacts* in a period indicate the commitment between customer and company. Individualisation in B2C-models can be measured by the number of *individual data fields* in the customer database.

Cooperations. Cooperations can significantly support reaching the critical mass. The success of cooperations can be measured by the *additional value or turnover* or by *synergies* they generate. The *speed* of entering into new markets and developing new products as well as the market share can rise through cooperations and can be a measure for their success. To reduce complexity, a company could build a *cooperation index*, weighing the effects mentioned according to their importance for the company.

Innovation. Innovation splits into two processes of identifying customer needs and creating new products. It can be measured concentrating on the process itself as well as on the quality of its result. Measures for the innovation process can be *time to market* (Friedag/Schmidt, 2000) of new products, *break even time* (Kaplan/Norton, 1997), the *period between two product generations* or the *rate of new innovations which eventually become new products*. The *R&D budget* additionally is an ex ante value driver for the innovation process. The innovation result can be analysed by the *time advantage over rivals*, the number of *customer needs identified* or the *share of turnover of new products*.

Leading Technologies. Technologies and information systems can be described by the parameters *availability* and *performance*, further on by *costs*, *complexity* and *level of standardisation*. Availability is measured by *uptime*, i.e. the share of time in which a system can be accessed. The extent to which a company is technology leader can be measured by its *ability to innovate* and a *comparison to competitors*. Value drivers for these are the *R&D-budget* and the *competence of the work force*. Technology measures are especially important for service providers whereas content providers and brokers focus rather on human capital.

Competent Employees. The performance of employees is defined by their *satisfaction*, their *loyalty* and *productivity* (Kaplan/Norton, 1997). A way of determining satisfaction and loyalty is to build an *index* of elements of a questionnaire as well as analysing employee *fluctuation*. *Employee turnover*, their *level of proficiency* and *error rates* are productivity measures. These ex-post indicators can be replenished by Performance drivers like *scheduled days for further education* or the *extent of variable payment*. Having a particularly high importance for online companies, the employee factor in the Balanced Scorecard tends to be described by a wider variety of measures in comparison to other branches such as the producing industry.

Optimised Processes. Due to a tendency of shortening temporal distances, basically production processes⁴² are subject of optimisation strategies, targeting the *speed of transactions*, the *speed of solving problems*, the *performance of systems* and *process costs*. Particularly content providers focus on *quality* and *actuality of*

⁴² Production processes exist besides innovation- and customer service processes. In the online business they principally cover the operation of systems and business transactions.

content created, whereas service providers and partly brokers concentrate on *efficiency* and *costs* of logistics and project management.

After having defined a set of key measures for online companies, suitable perspectives for an online-Balanced Scorecard are to be chosen.

In comparison to other branches, a Balanced Scorecard in the online sector has to be focused especially on information technology – which here has not only a supporting function – and in more a holistic way on a company's market than on customers themselves. Therefore perspectives for IT-potential and Market/Customers are essential. Internal processes are primarily relevant for service providers whereas employees play more a significant role for content providers and brokers. Depending on a company's estimation of their importance, employee- and IT-potentials as well as processes can be combined to single perspectives. This may be a "future readiness perspective" as defined by Hasan/Tibbits (2000), which concentrates on upcoming opportunities and challenges. Eventually a financial perspective is to be mentioned, which is compulsory for companies of any kind which have financial profit objectives. Here the measure *customer lifetime value* plays a key role in the field of B2C e-business as it depicts the present value of a single customer, including present- and future revenues, variable costs and marketing expenses.

Table 1 summarises the discussed measures and recommends an allocation to perspectives, which up to now have been used in three business cases, as mentioned chapter 1.

Table 1: Critical success factors, key measures and perspectives.

Critical success factors & measures		Perspective
Critical Mass		Market / Customers
Number of users/customers	●	→
Market share / Growth of turnover	●	→
Return buyers	●	→
Customer Relations		Processes
Customer Satisfaction	●	→
Customer lock in	●	→
Intensity of communication	●	→
Cooperations		→
Speed of innovation & market entry	●	→
Value added / Synergies	●	→
Innovation		Technology
Time to market	●	→
R&D budget	●	→
Innovation to product rate	●	→
Leading Technologies		→
Availability / Performance	●	→
Costs	●	→
Complexity / Level of standardisation	●	→
Competent Employees		Employees
Employee satisfaction	●	→
Fluctuation	●	→
Productivity	●	→
Financial factor		Financial
Net income	●	→
Company value	●	→
Customer lifetime value	●	→

This paper only gave an overview of possible measures for an online Balanced Scorecard. Therefore a more elaborate set of measures can be found at a dedicated website on the internet (see www.wi2.wiso.uni-goettingen.de/forschung/dm/bsc/bsc.htm).

4. CONCLUSION AND OUTLOOK

The paper on hand has tried to sketch the characteristics of a Balanced Scorecard in the online media sector. The result – a generic model of success factors, perspectives and reasonable measures – can be used as a framework for online companies which want to build their own Balanced Scorecard. So far, a company that wants to implement a Balanced Scorecard has to start analysing its critical success factors, discuss strategies and develop measures. The model on hand can streamline this process by indicating a direction. It is a first step towards a partly standardised concept for developing Balanced Scorecards in the media sector and solves the problem of finding a direction for a Balanced Scorecard implementation. Although different kinds of media companies (Content providers, brokers, service providers) are surely not to be managed and measured identically, the discussed model can be a starting point for either of them.

From another perspective, the standardised development of a Balanced Scorecard can be seen critical, since a constituting element of the system is the analysis and communication of the company's strategy within an elaborate implementation process – skipping that by using a framework could end up in a less company specific Balanced Scorecard. Thus the presented generic model is not aimed at omitting important implementation steps, it should be a guideline.

The mentioned cause-and-effect relationships and the inherent Balanced Scorecard management cycle were only discussed marginally in this paper and can be subjects of further analysis. The dynamics of the media sector and the lack of time for analytical activities – especially in growth companies – can cause difficulties for these intentions.

Due to missing long term studies on the Balanced Scorecard in media companies an empirical validation and verification of the findings in this paper is not available yet.

5. REFERENCES

- Ansoff, I.* (1965): *Corporate Strategy*, New York.
- Böhning-Spohr, P./Hess, T.* (2000): *Geschäftsmodelle inhalteorientierter Online-Angebote*, Arbeitspapiere der Abt. Wirtschaftsinformatik II, University of Goettingen, Nr.1/2000, Goettingen, 2000.
- Brinker, B.* (1999): *Intellectual Capital: Tomorrow's Assets, Today's Challenge*, CPA Working Paper, <http://www.cpavision.org/vision>, Download on 2000-08-25.
- Götze, U./Mikus, B.* (1999): *Strategisches Management*, Chemnitz, 1999.
- Hacker, T.* (1999): *Vernetzung und Modularisierung – (Re)Organisation von Medienunternehmen*, in: Schumann, M./Hess, T. (1999, Editors): *Medienunternehmen im digitalen Zeitalter*, Wiesbaden.
- Hagel III, J./Armstrong, Arthur G.* (1997): *net gain – expanding marketes through virtual communities*, Harvard Business School Press, Boston/Massachusetts, 1997.

- Hasan, H./Tibbits, H.R.* (2000): Strategic Management of Electronic Commerce: an adaption of the Balanced Scorecard, <http://www.uow.edu.au/~hasan/aica/hasan-tibbits.htm>, Download on 2000-08-11.
- Horváth, P.* (1991): Controlling, 4. Ed., Vahlen.
- Kaplan, R.S./Norton, D.P.* (1997): Balanced Scorecard, German translation by Péter Horváth, Stuttgart, 1997.
- Killius, N./Mueller-Oerlinghausen, J.* (1999): Innovative Geschäftsmodelle in digitalen Medien, in: Schumann, M., Hess, T. (1999, Hrsg.): Medienunternehmen im digitalen Zeitalter, Wiesbaden, p. 139-153.
- Laidlaw F.J.* (2000): Acceleration of Technology Development – The Experience of 28 Projects Funded in 1991, <http://www.atp.nist.gov/eao/ir-6047.htm>, Download on 2000-11-07.
- Manning, R.* (2000): Internet Branding and the User Experience, <http://www.clickz.com/cgi-bin/gt/print.html?article=1516>, 2000-03-31, Download on 2000-10-29.
- Porter, M.E.* (1980), Competitive strategy: Techniques for analysing industries and competitors. New York: The Free Press
- Porter, M.E.* (1991): Towards a Dynamic Theory of Strategy, in: Strategic Management Journal, Nr. 12, p. 95-117.
- Prahalad, C.K, Hamel, G.* (1990): The core competence of the corporation, in: Harvard Business Review, Nr. 68, p. 79-91.
- Schumann, M./Hess, T.* (2000): Grundfragen der Medienwirtschaft, Berlin/Heidelberg.
- Van Grembergen, W./Van Bruggen, R.* (2000): Measuring and improving corporate information technology through the balanced scorecard, <http://is.twi.tudelft.nl.ejise/vol1/issue1/paper3/paper.html>, Download on 2000-08-20.
- Weber, J./Schäffer, U.* (1998): Balanced Scorecard, Advanced Controlling Reihe: Neue Aufgabenfelder und Instrumente, Band 8, Vallendar, 1998.
- Wernerfelt, B.* (1984): The resource-based view of the firm, in: Strategic Management Journal, Nr. 5, p. 171-180.
- Zerdick, A./Picot, A./Schrage, K./Artopé A./Goldhammer, K./Lange, U.T./Vierkannt, E./López-Escobar, E./Silverstone, R.* (2000): E-Economics – Strategies for the Digital Marketplace, Berlin/Heidelberg.