



Dealing with the knowledge economy: intellectual capital versus balanced scorecard

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Abstract

Purpose – This paper compares balanced scorecard and intellectual capital and finds important differences between their theoretical underpinnings, which suggest that the breath of indicators will work differently in organisations.

Design/methodology/approach – Analysing texts about balanced scorecard and intellectual capital, the paper discusses not the obvious similarities – that they are both integrated performance management systems – but four more aspects: strategy, organisation, management, and indicators. Comparing these four dimensions the paper discusses the differences arising from the very different theories of strategy that they presuppose: competitive advantage versus competency strategy.

Findings – The paper suggests that the very different notions of strategy that underpin the balanced scorecard and the intellectual capital approach make such comprehensive performance management systems behave in very different ways – the difference between a tightly coupled and a loosely coupled system accounts for this.

Research limitations/implications – The main limitation is that the paper is primarily a literature study and therefore it is not certain that in practical situations companies will necessarily adopt the theoretical perspectives mobilised behind balance scorecard and intellectual capital.

Practical implications – The usefulness of that paper is that practitioners may understand the breath of implications of a shift in strategic focus and realise the various organisational conditions that can help mobilise the use of indicators in different ways.

Originality/value – The paper's analysis shows how the two models assume how indicators work in an organisational systems and concludes that the differences are significant and that therefore there are considerable differences in how a system of indicators may work in the context of balanced scorecard compared with the context of intellectual capital.

Keywords Balanced scorecard, Intellectual capital, Knowledge management, Performance measurement (quality), Performance management

Paper type Research paper

The meagre relationship between accounting cues (earnings and/or book values) and market values provides a dramatic justification not only for the current interest in intellectual capital (Stewart, 1997; Sveiby 1997, Sullivan, 1998), but also for the recent version of balanced scorecard (Kaplan and Norton 2001). Sveiby (1997, p. 8) suggests as follows:



When the market price is higher than the book value . . . there must be something among the company's assets that will yield higher than bank interest in the future. These assets are invisible because they are not accounted for. They are intangible because they are neither brick nor mortar nor money.

And Kaplan and Norton (2001, p. 2) follow suit:

[R]ecent studies (by Baruch Lev, added) estimated that . . . the book value of assets accounted for only 10 to 15 percent of companies' market values. Clearly, opportunities for creating value are shifting from managing tangible assets to managing knowledge-based strategies that deploy an organization's intangible assets.

At least until the downfall of technology shares, the growing difference between firms' market value on the stock exchanges and their book values is said to reveal intellectual capital or intangible assets. After all, the argument goes, since the balance sheet accounts for all physical capital, the difference between market values and book values expresses intellectual capital. This difference is rarely, if ever, really "filled out", however, but it is used to extend issues of reporting beyond the financial balance sheet. Edvinsson (1997) divides intellectual capital three ways into "human capital", "organisational capital" and "customer capital", which identify the areas where the conventional financial statements do not go. And Kaplan and Norton's (1996a, 2001) balanced scorecard complements the "financial" perspective with "customer", "internal business process", and "learning and growth" perspectives.

Both models illustrate that an addition to the conventional financial reporting is possible and interesting. They allow "non-financial" indicators to be part of a firm's reporting system, and it has been suggested that they are almost the same thing – or, more precisely, that balanced scorecard may be one of the techniques to help bring forth intellectual capital (e.g. Bontis *et al.*, 1999; Johansen *et al.*, 1998, 2001; Olve *et al.*, 1999, Petty and Guthrie, 2000). Intuitively, there are similarities between balanced scorecards and intellectual capital statements. They organise financial and non-financial indicators, which are coupled to the firm's strategy. They differ from the financial accounting system's logic of double entry bookkeeping and they go beyond the closed system of revenues, costs, profits, assets and liabilities. In contrast, they both refer to strategy that lies outside the measurement system itself as the object of the indicators.

They look similar – but are they similar? And if they are different, is this important for the management of intellectual capital? These questions are addressed in this paper. It argues that an appreciation of the differences is useful since it will allow a detailed discussion of how to attach indicators to strategy. This will direct attention to "small" differences that may have huge impact for the strategy proposition and for the reading of indicators. This conclusion is based on an analysis of texts about balanced scorecard and intellectual capital respectively. It may be, obviously, that some firms will experiment with them both and accommodate them together in their arsenal of technologies of managing. This is an empirical issue to be sorted out in a different context. In this paper we merely try to take the texts about balanced scorecard and intellectual capital seriously and analyse them specifically in terms of their presentation of the two sets of ideas.

Our comparison has four dimensions each of which is a distinct way to sum up their differences – and similarities and complementarities. The first dimension is strategy, the second is organisation, the third concerns management, and the fourth is about indicators. This analytical breakdown of issues is used to analyse texts about the balanced scorecard

(which are primarily written by Kaplan and Norton who stand out as its sole writers) and intellectual capital (which has more writers and a more diverse discussion). Using these analytical dimensions it is possible to suggest that balanced scorecard and intellectual capital refer to organisation and management differently. Balanced scorecard focuses on describing the firm as a value chain which closes the gap between a customer's want and the firm's product. Alternatively, intellectual capital sees the firm as a network of heterogeneous knowledge resources and competencies – a value net – which makes it able to deliver a certain value to the user. Even if, *prima facie*, they appear to share many characteristics, this is only if a very limited exposition of the two ideas is performed. This is the case only if a comparison is made between the drawings or illustrations that identify indicators in areas beyond the financial such as the “customer perspective”/“customer capital”, “internal process perspective”/ “organisational capital”, and “learning and growth perspective”/“human capital”.

There are interesting differences, however, because they differ in terms of strategy (competitive strategy versus competency strategy), of organisation (vertical versus lateral relations), of management (detailing versus visualising objectives), and of indicators (related causally versus bundled complementarily). Available balanced scorecards present a story about the firm's budget, while available intellectual capital statements narrate the firm's resources.

To develop and justify this thesis, the paper is organised in four major sections discussing strategy, organisation, management and indicators. As mentioned, this is a text analysis. It is not a linguistic analysis, nor a poststructuralist reading of these texts. It is merely a reading that records the line of argument presented on the pages, rather than behind and around the pages, of these texts[1].

Ideas of strategy

For both balanced scorecard and intellectual capital, strategy is a centrepiece. Both justify the inclusion of indicators in terms of their relevance for reflecting strategy. In contrast to the financial system of double entry bookkeeping, indicators are here relevant if they help understand strategy rather than obey principles of recording financial transactions. Balanced scorecard and intellectual differ with respect to theory of strategy, however. The balanced scorecard builds on competitive strategy (Porter, 1980, 1985, 1996), as it is “consistent with the industry and competitive analysis articulated in several of Michael Porter's widely followed corporate strategy books” (Kaplan and Norton 1996a, p. 37) while intellectual capital orients itself towards competency-based strategy (see Grant, 1998, Hamel and Prahalad, 1994), which “generates value through the knowledge, skills, talents and know-how of employees. This is exactly what all the literature on core competencies has been concentrating on” (Roos *et al.* 1997, p. s.35).

Balanced scorecard

To Porter (1996, pp. 64, 77), strategy is concerned to build the value chain across the firm, and the:

[...] essence of strategy is in its activities – choosing to perform activities differently or to perform different activities than rivals ... Deciding which target group of customers, varieties, and needs the company should serve is fundamental to developing a strategy. But so is deciding not to serve other customers or needs and not to offer certain features or services.

Here, strategy presupposes rivals and a stable target group of customers. These have to be in place if strategy is possible as they are the entities around which strategy is formulated and executed. When Kaplan and Norton (2001, p. 89ff.) accept this idea of strategy as essential to the balanced scorecard, they also mobilise balanced scorecard as a way to build the value chain. Even if the balanced scorecard has developed over time, the relationship to Porter's value chain has not be questioned.

The balanced scorecard has developed from performance measurement (Kaplan and Norton, 1992, 1993) through strategy implementing (Kaplan and Norton 1996a, 1997) to strategy management (Kaplan and Norton 2001, p. 3)[2]. Initially, the focus was on developing new indicators in four perspectives (the financial perspective, the customer perspective, the internal business processes and the learning and growth perspective), and it gradually developed into a strategic management system oriented towards describing "the process for transforming intangible assets into tangible customer and financial outcomes" providing "a framework for describing and managing strategy in the knowledge economy" (Kaplan and Norton, 2001, p. 69). With the new century, balanced scorecard is seen as a method to manage the knowledge economy, but the idea of strategy has been Porter's competitive strategy/advantage all along. Focal to Porter's theory of strategy is competition between rivals, and therefore attention to the immediate locus of competition around customers.

In Kaplan and Norton's (1996b, p. 58, 78) words the sequence is as follows:

[...] choosing the market and the customer segments the business unit intends to serve; identifying the critical internal business processes that the unit must excel at to deliver the value propositions to customers in the targeted market segments; and selecting the individual and organizational capabilities required for the internal, customer, and financial objectives.

Strategy and the balanced scorecard is clearly about choosing a market position and organising the internal business processes to reach this position. First come financial targets, then the relevant customer segment, then appropriate internal processes, and then relevant learning and growth. As all is derived from competitive advantage, it is also understandable why the generic possible strategies resemble Porter's generic strategies.

Kaplan and Norton (2001, p. 86 ff.) suggest, drawing on Treacy and Wiersema (1995), that there are three possible types of strategies for the customer perspective: product leadership, customer intimacy and operational excellence. They then translate into internal processes organised around innovation processes, customer management processes and operational processes respectively. Finally, learning and growth concern understanding customer needs, time to market and best practice sharing. This is a cascade of implications. If strategy has been determined a particular way, determined by a calculation of its effects on the financial well-being of the firm, its consequences for internal processes and learning and growth fall out.

Intellectual capital

An alternative strategy theory – competency-based strategy – has been associated more with intellectual capital. To Grant (1996, 1997, 1998, p. 181):

[...] in a world where customer preferences are volatile, the identity of customers is changing, and the technologies for serving customer requirements are continually evolving, an externally focused orientation does not provide a secure foundation for formulating long-term

strategy. When the external is in a state of flux, the firm's own resources and capabilities may be a much more stable basis on which to define its identity. Hence, a definition of a business in terms of what it is capable of doing may offer a more durable basis for strategy than a definition based upon the needs which the business seeks to satisfy.

Here, strategy presupposes capabilities that continually evolve slowly and incrementally, and long term. Even if there may be competition, this is not central to capabilities because they have to be developed with a perspective that outlasts customers and rivals[3]. Firms are competitive when they have "competencies that spawn unanticipated products" because the "real sources of advantage are to be found in management's ability to consolidate corporatewide technologies and skills into competencies that empower individual businesses to adapt quickly to changing opportunities" (Prahalad and Hamel 1990, p. 81; Hamel and Prahalad, 1994). Competencies are slow because they require training to be learnt. It takes time to develop them because they are based on historically developed abilities to define and combine things, people and technologies. Stability in competencies, according to Hamel and Prahalad, allows the firm to approach a variety of markets as they develop – appear and disappear – in real time. Change is a "normal thing", because competency strategy is at a different plane than competitive strategy. It is by continuous internal capabilities that the changing external market can be manoeuvred.

Intellectual capital has a more heterogeneous history than balanced scorecard even if the original principles are often associated with the work of Edvinsson (Edvinsson, 1997, Edvinsson and Malone, 1997) and Sveiby (1997)[4]. It is concerned with the firm's efforts to improve their competencies or knowledge resources and strengthening its unique know-how. Their segmentation of intellectual capital into human, organisational and customer capital[5] illustrates how it is necessary to prepare for the future and "make it an asset", as Edvinsson says. Sveiby (1999, p. 180) has similar thoughts when he mentions that short term results and financial market performance are loosely coupled to the capabilities of the firm. Therefore it is a fallacy to believe "that you can predict the future over a certain 'planning horizon'" (Roos *et al.*, 1997, p. s.119). When the future is an asset, and still unpredictable, what is left is the firm's efforts to be prepared to accommodate "any" possible future. This is why there is no hierarchy between human, organisational and structural capital. They "complement one another . . . Corporate value . . . arises . . . from the interaction between *all* of them" (Edvinsson and Malone, 1997, p. 145), and "intellectual capital is not created from discrete wads of human, structural, and customer capital but from the interplay among them" (Stewart, 1997, p. 78).

Strategy does not have one path through the system of resources. Intellectual capital is related to questions about identity: "who you are, and what you want to be" (Roos *et al.*, 1997, p. 62). This is not merely an objective; it is an identity crafted around ability and knowledge. In their dialogue on knowledge, Socrates and Theaetetus conclude that knowledge is never something by itself (Plato, 1996). It is a capability because it has to be directed at something:

Socrates: [. . .] When you speak of cobbling, you mean by that word precisely a knowledge of shoemaking?

Theaetetus: Precisely.

Socrates: And when you speak of carpentry, you mean just a knowledge of how to make wooden furniture?

Theaetetus: Yes.

Socrates: In both cases, then, you are defining what the craft is a knowledge of?

Theaetetus: Yes.

Socrates: But the question you were asked [...] was not what are the objects of knowledge, nor yet how many sorts of knowledge there are. We did not want to count them, but to find out what the thing itself – knowledge – is.

Socrates concludes from his interactions with the student Theaetetus that it is difficult to “find out what the thing itself – knowledge – is”. When one tries to grasp knowledge, one is “defining what the craft is a knowledge of”. Therefore, knowledge exists in relation to a craft – in relation to a practice – and therefore as a capability. To act – to make a difference.

However, to act implies action towards something or somebody, and to make a difference implies difference to somebody or something. Therefore, there are also users and customers in the universe of intellectual capital, but they are not there only as objects for revenue streams; they are there to help the firm to develop capabilities. Such help is often found in making strategy a knowledge narrative which generally, rather than specifically, presents the identity of the firm around an ambition to produce something “good”, how it departs from something “bad”, and what efforts have to be made to allow the “good” full fruition. Such a narrative (Boland and Schultze, 1996; Czarniawska, 1997) is not just an example. It is a whole plot of “good” things, barriers in the form of “bad” things, and a list of possible mechanisms to be put in place to reach the “good”. The plot specifies how the “good” purpose requires the firm to be “capable”, “knowledgeable” or “intelligent”.

Knowledge narratives differ from statements of strategy (such as product leadership, customer intimacy and operational excellence). Captions such as “Quality of life”, “Frictionless education in flexible networks”, and “Intelligent solutions” are headlines of knowledge narratives of firms that differentiate themselves on their capability rather than on industry-specific conditions of competition (see Mouritsen *et al.*, 2002). The ambition to deliver “Quality of life” is for Coloplast, a producer of disposable care products (www.coloplast.dk), a narrative of how the firm can develop insights into users’ situations, transport these into product development, and develop quality control so that the products will not leak and produce embarrassing situations. This ambition cuts across product leadership, customer intimacy and operational excellence. They are all there, and yet they are only fully understood against the ambition to create “Quality of life”.

Likewise, the ambition to deliver “Frictionless education in flexible networks” is for the Danish Insurance Institute (www.fh.dk), a school offering part time education for insurance people, an attempt through IT and virtual education to allow the student his or her own integration of studies, work life and social life. The efforts – the development of IT platforms, pedagogical methods and mechanisms to allow interpersonal reflection among students – also cut across product, customer and operations, whose particular form can only be understood against the ambition to create “Frictionless education” since this is how attention to corporate capabilities are centred.

Last, the large construction consulting firm Carl Bro (www.carlbro.dk) produces “Intelligent solutions” which combines a series of expert knowledge in various areas of engineering in a unique solution to a customer. Often the customer cannot specify the required service and Carl Bro helps this forth by combining and assembling internal

expert competencies in novel configurations. The “Intelligent solution” is the ability to organise and identify all aspects of complex, novel, and unique large construction projects and integrate human, technical and environmental concerns on many more dimensions that any user will be able to specify. This also cuts across product, customer and operations.

These three examples illustrate that a strategy for managing knowledge may illustrate narrative elements. This is how it is possible to define what type of capabilities that the firm has to have in place; intellectual capital and corporate capabilities may be understood as narratives of achievements.

Ideas of organisation

The ideas of organisation of balanced scorecard and intellectual capital differ in terms of the preferred direction of authority. While both centre top management they do so with very different emphases.

Balanced scorecard

To Kaplan and Norton (2001, p. 213):

Strategy-focussed organisations understand well the importance of engaging and aligning all of their employees to the strategy. Ultimately, the employees are the ones who will be implementing the strategy.

It is important to communicate strategy intensively because it will not be understood otherwise[6]. Furthermore, there has to be correct linkages between corporate strategy and personal scorecards.

This model of organisation focuses on detailing the corporate strategy into each and every employee’s work situation. The link to corporate strategy is described as clear and succinct, and even if personal scorecards will not have very many indicators (up till 15), they have to reach back to corporate strategy. This allows vertical co-ordination to be made and hierarchical relations to be drawn up, which is the way balanced scorecard makes strategy “everyone’s job” (Kaplan and Norton, 2001, p. 211 ff):

This is not top-down. This is top-down communication, leaving to individuals at their local work sites the task of finding innovative ways of helping the organization to achieve its strategic objectives (Kaplan and Norton, 2001, p. 216).

Communication is important because even in situations where it does not command activities to be made, it directs the attention and efforts needed given that the strategic objectives are given as part of the translation between customer perspective, internal processes perspective and learning and growth perspective. This translation is a given. Communication about it is not a given, and the actions needed to implement strategy are not given.

This model of a firm’s organisation is one that develops employees to be able to execute the strategy. Noting that a well-defined strategy is one that causally relates the four perspectives, the room for manoeuvrability is not so clearly defined – if at all present. If the linkages are so well designed that they define all aspects of strategy, how can employees manoeuvre and find innovative ways of achieving strategic objectives? It is clear that the balanced scorecard is seen as providing an essential version of strategy that cannot be compromised. Kaplan and Norton (1996b, pp. 66-7) quote a divisional manager in a large US company in the following way:

In the past, if you had lost my strategic planning document on an airplane and a competitor found it, I would have been angry but I would have gotten over it. In reality, it wouldn't have been that big a loss. Or if I had left my monthly operating review somewhere and a competitor obtained a copy. I would have been upset, but, again, it wouldn't have been that big a deal. This Balanced Scorecard, however, communicates my strategy so well, that a competitor seeing this would be able to block the strategy and cause it to become ineffective.

It appears that the balanced scorecard is very effective. It can comprise all activities needed to implement the strategy. It therefore does not consider how it is possible to allow individuals' manoeuvres. This would challenge the connected and coherent strategy.

This version of the firm's organisation is thus one where the balanced scorecard monitors the implementation of an analytically designed collection of processes, which are derived from the analyses of customers and competitors conducted by top management. Manoeuvrability, competencies and knowledge resources are considered relevant insofar as they are part of the infrastructure that makes the value chain supply the services that will satisfy identified customer demands. Therefore, there is a distinction between "thinkers" and "doers", and top management is there to supervise the correct implementation of its strategy through the indicators of a balanced scorecard. There is a clear focus on the vertical co-ordination of activities.

Intellectual capital

Roos *et al.* (1997, p. 119) say that a fallacy "of planning is the inherent detachment of thinkers (strategic planners) from doers (line managers), strategy formulation ... from implementation". This may not be a novel point (see Mintzberg, 1994), but it helps explain why intellectual capital sees the organisation through lateral, in addition to vertical, glasses[7]. For example, in the case of Skandia, the Swedish insurance company where Leif Edvinsson was intellectual capital director, the organisation was described as an "imaginative organization" or a "fishing net organization" which was depicted by a set of circles where top management is in the middle and towards the edges middle-managers, ordinary employees and customers were found (see Mouritsen *et al.*, 2001c). This organisation is seen to develop its relationships on its margins and by the margins rather than by the core. The work of the firm relative to customers is situated on its margins, and this is not the work, which is important to top managers. They are divorced from this type of action, and, as Skandia suggests, they are the "saddest people".

Action is situated at the edges, rather than at the centre, of networks, or fishing nets, where new, fragile and provisional hierarchies are incessantly developed when empowered employees and business teams make themselves central to corporate business issues; always at the edges, and always temporarily. New hierarchies develop all the time, and employees can be centre or periphery in their own lives if they dare to take responsibility and carve out their position. It is a tale of how empowered individuals define and solve the firm's problems. A new commercial agenda is crafted where top managers are partly removed from the spaces of action where each person sees him/herself as providing a service to others in a network of activities – a lateral organisation.

This version of an organisation mobilised around networks of employees and customers is organised more from the sides and the bottom than from the top. Even if this decentring of management may be limited in practical situations, the ethos expressed by an intellectual capital approach is to make employees responsible for the firm's problems – the firm's problems are privatised (Mouritsen, 1998), and "employability", the ability to

trust employees to be empowered employees, involves their commitment to organisational issues and problems. They have to be part of defining and executing the firm's strategy, because it is being realised and developed in the numerous daily situations where customers are engaged. It may be, as Grant (1998, p. 181) tells us, that when "the external is in a state of flux, the firm's own resources and capabilities may be a much more stable basis on which to define its identity", but this flux has to be managed. And when the flux really is flux, top management are too remote to manage it, and therefore frontline employees are called on to do it. Otherwise, speed suffers – and speed is what is needed when matters are in flux. The matters outside the flux – the firm's resources and competencies – are stable, however, and they can be developed with a long-term perspective. This is a lateral organisation because there is direct interaction on significant matters between middle managers and customer.

The idea of management

The particular job to be executed by top managers also differs between balanced scorecard and intellectual capital. This is not surprising given the status of organisational arrangement in the two situations. Yet, the directive role of top managers in the balanced scorecard, and the missionary role of top managers in the intellectual capital context are important.

Balanced scorecard

It is probably right, that balanced scorecard celebrates top/senior management. Managers think, and their thoughts are driven down into the organisation through the balanced scorecard. Kaplan and Norton (2001, pp. 361-2) are clear about this and suggest that:

[...] the biggest source of failure occurs when the project has been delegated to a middle-management team ... Senior management commitment is required for several reasons: First senior management must articulate the organization's strategy ... But even more important [is] that the process of building a scorecard requires an emotional commitment from them.

Top/senior management is expected or assumed to be able to make the correct strategy, which can be translated in all its aspects down through the organisation ending in personal scorecards for each individual. In this sense, top managers are directors of the development and implementation of a detailed strategy plan.

The manager in the balanced scorecard is helped to design a value chain. This is an analytical task where the gap between a customer and the firm's processes is closed. The resulting firm is a tightly co-ordinated entity where processes and learning and growth are designed as well fitting parts of a totality. This tight co-ordination requires anything and anybody to function according to the precise tasks they are given. Management's function is direction.

Intellectual capital

To Roos *et al.* (1997, p. 34):

[...] intellectual capital is composed of ... a thinking part (the human capital) and a non-thinking part (structural capital) ... [H]uman capital comes from the knowledge, the attitude and the intellectual agility of employees.

To Stewart (1997, p. 86), human capital invents:

Money talks, but it does not think; machines perform, often better than any human being can, but do not invent. [The] primary purpose of human capital is innovation – whether of new products and services, or of improving in business processes.

Invention, thinking and innovation destabilise organisational routines. They continually change structural capital and re-create it to suit new situations and relationships. Therefore the strategy of the firm cannot be a plan for the future, but more a set of principles according to which it is possible both to unleash individuals' creativity and yet orient it towards a future of say, "Quality of life", "Frictionless education in flexible networks" or "Intelligent solutions" which are all metaphors of the future rather than a plan for the future. To Nonaka (1994, p. 31):

[T]op management gives voice to a company's future by articulating metaphors, symbols, and concepts that orient the knowledge-creating activities of employees ... they give "organizational intention" that is beyond the personal intention of top management as an individual. This is achieved by asking the questions on behalf of the entire organization: What are we trying to learn? What do we need to know? Where should we be going? Who are we?

Managers craft metaphors and are missionaries. This is the communication device and the orientation that can be achieved in an individualised organisation (Bartlett and Ghoshal, 1997) where individuals' motivation makes knowledge sharing, minding of innovation and interest in changing things a continuous principle of organising. Human capital presents an image of a firm where individuals are not to wait for directions: they are seen to be self-directing. If this idea can be internalised, there may a role for motivation as a mechanism of productivity. Only in such a situation will individuals disclose their own human capital and let it be a resource in collective decision-making and problem-solving activities.

The whole organisational or social economy of creativity, however, rests uneasily in the possibly anarchistic movement of liberal human capital. Therefore, top management has to integrate human and organisational capital. This is how individual creativity is aligned with organisational purposes and pushes creativity in certain "predictable" directions. There is "freedom" to operate, but within the framework of the metaphors, common sense and not least, the technologies and procedures that are found in structural capital. Managers therefore, have to manage by metaphor and mission – but also by insisting on structural capital be used and re-used.

The idea of indicators

Balanced scorecard and intellectual use "non-financial" indicators as supplements to the conventional set of financial indicators. Both suggest that in addition to financial capital/financial perspective, there is customer capital/customer perspective, organisational capital/internal process perspective, and human capital/learning and growth. The categories are not similar but have parallel readings. However, they are not accorded similar roles in the whole complex of balanced scorecard or intellectual capital. To balanced scorecard they are causally related while in intellectual capital they are bundled and complementary.

Balanced scorecard

“Each measure of balanced scorecard becomes embedded in a chain of cause-and-effect logic that connects the desired outcomes from the strategy with the drivers that will lead to the strategic outcomes” (Kaplan and Norton, 2001, p. 69), and “every measure selected for a Balanced Scorecard should be an element in a chain of cause-and-effect relationships that communicates the meaning of the business unit’s strategy to the organization”(Kaplan and Norton 1996a, p. 31). To Kaplan and Norton, strategy maps are always hypotheses, and the cause-and-effect relations are visualisations hereof.

Nevertheless, the relationships between the elements of the balanced scorecard are presented as one-directional. Strategy is derived from the firm’s market situation, but the work of the firm is achieved from the bottom of the scorecard and up. Learning and growth leads to internal processes that then cause results in the customer perspective which then lead to financial results[8]. For example, factory relation skills (learning and growth) lead to “A”-class factories (internal processes), which then lead to product quality and shopping experience (customer perspective) which then creates revenue growth and profitability (financial perspective) (Kaplan and Norton 1996a, p. 71). A cause-and-effect presentation in strategy maps of the relations between the four perspectives suggests that a form of “simulation model” of the relations between the four perspectives is the implicit ambition. The hope is to create the links that make it possible to forecast the financial results, and therefore the other perspectives are supplements to the financial perspective. They are elements of a chain of arguments that stabilise the financial forecast.

This is perhaps also why as bottom line, the balanced scorecard has two generic elements of strategy: Revenue growth strategy and productivity strategy; profits are composed of revenues and productivity. This makes it in some respects similar to financial statement analysis, and the similarity to new financial models such as EVA are apparent. In effect, many of the indicators in the balanced scorecard are financial ones that have the potential to be integrated into a final bottom line. Elements such as cost and productivity, market share, growth and yield are often elements in a systematic financial calculation. This and the cause-and-effect ambition makes the balanced scorecard’s ambition not only a matter of implementing strategy, but also possibly of forecasting future financial results (see, e.g. Kaplan and Norton, 2001, p. 295).

Intellectual capital

Intellectual capital’s indicators are often seen as a loosely coupled set of indicators. Rarely are issues of cause-and-effect raised systematically[9], and the indicators are presented as “wholes” where interaction – and mutual dependence – among them is present.

Intellectual capital is not divorced from financial capital – shareholder value is driving it. The original justification found in huge market-to-book ratios is case in point. The interest is to relate to the market value of the firm. However, the ambition to fill out the gap between market value and book value with new indicators is a sorry one that cannot be accomplished. These new indicators are all but examples and do not create the boundaries – as does double entry bookkeeping – of a well rounded space of possibilities. There is no possibility to consolidate intellectual capital indicators in an absolute model. Is the list of possible indicators definitive? “Hardly” (Edvinsson and Malone, 1997, p. 185). Can the measurement present a full and comprehensive picture of a company’s intangible assets? “Such a system is not possible” Sveiby (1997, p. 150).

television programme. He reveals the capabilities that have to be in place for the ancient Egypt to be transported to the modern Europe – a voyage of roughly 4,000 years and 4,000 kilometres. He illustrates that to be able to accomplish this, the firm has to have a jeep to drive there, mummies to make the story interesting; it has to be recorded by a camera, there has to be a film to allow this to be done. There has to be an editing facility so that the film can be made either into a horror-movie with mummies and all, or it can go into school television. A long series of technological capabilities have to be in place to transport pyramids to Europe. This is the left side of the drawing.

There is more, however. The right side shows how the television show is made interesting. A book has to be written. The father reads about it in the newspaper, and then buys the book and reads it aloud the son, who then gets interested in seeing the television show.

Capabilities are complex – and they are bundled. There is no causality between the elements, but they all have to be in place to produce the television show. Each of the elements can be improved on, obviously, and this is where knowledge management comes in. It is there to improve on the capabilities individually. Their bundling is relevant when put to use, or as competency. This is where the practice of combining and aligning them to execute knowledge is a productive force.

The relation between Carl Bro's "Intelligent solutions" and the drawing is telling: they are both about how to construct the set of elements that have to be in place to account for the product or service that is their effect. This is a bundled set of elements.

Comparing balanced scorecard and intellectual capital

The presentation of balanced scorecard and intellectual capital performed above dramatises their differences, and pays only limited attention to similarities. This is partly due to the principles of our analysis, which is to read the texts literally. The similarities are also clear, however. Both ideas suggest that non-financial indicators be interesting and relevant; that strategy has to be an explicit part of a performance management system; that there has to be a "comprehensive" view of the firm's situation; and that there must be attention to intangibles and knowledge. These similarities probably make writers such as Bontis *et al.* (1999), Petty and Guthrie (2000) and others suggest that balanced scorecard be an integral element of intellectual capital. Our analysis, however, suggests that the differences between balanced scorecard and intellectual capital are also interesting. They differ, e.g. in terms of their involvement with organisational strategy, organisation and management that create radically different version of how it is possible to prescribe management decision-making. These differences can be compared against assumptions about the firm, strategy, organisation and management and indicators.

Assumptions about the firm

Table I illustrates how balanced scorecard and intellectual capital presume different ideas of the firm, its development and its functions in a market situation.

From the balanced scorecard perspective, the firm is highly coupled to its customers and rivals that determine the firm's value chain. The identity of the firm, and its singular contribution to technology and innovation, are tied to the market. In contrast, from an intellectual capital perspective, the firm's competitiveness comes primarily from within. Its attention is to the long and continuous development of certain

| | Balanced scorecard | Intellectual capital |
|--------------------------------|---|---|
| The development of the firm | Balanced scorecard requires a competitive advantage/strategy perspective that focuses on the external market relation. Growth and profitability arise out of competition and market positioning. This makes the market more important than production, which constantly has to change with changing market conditions | Intellectual capital requires a competency perspective as it focuses on internal growth drivers in the form of resources, capabilities and competencies, which are expressions of the experience and collective problem-solving abilities that have been historically formed and embedded in the firm. The production potential is more important than the market |
| Model of the firm's situation | Balanced scorecard sees the firm as value chain – an input-output model divided into finances, customers, internal processes and learning and growth. The individual indicators sequentially dependent: the customers have first, priority, second come the internal processes and lastly, learning and growth. This sequence creates financial results | Intellectual capital looks at the firm as a bundle of capabilities/competencies and knowledge resources, which are joined by the complementarity and connectivity thereof. These resources are mutually dependent |
| Origins of the competitiveness | Competitiveness is built on continual repositioning in the marketplace through adaptation of the value chain to that of the customers | Competitiveness is an ability to continually build capabilities and competencies, which have a historical trajectory and yet are able to produce new and unexpected products |

Table I.
Firm

capabilities and competencies, that can have all kinds of expression in a multitude of services and products. This does not take the market situation for granted.

Assumptions about strategy

Table II shows differences between balanced scorecard's attention to positioning strategy, and intellectual capital's focus on competency strategy.

The balance scorecard mobilises management as the *locus* from where all wisdom and insight emanate. It surveys the environment and creates the appropriate tight links to the value chain and the balanced scorecard initiatives. It then constructs the elements of the firm's response to the environment, and each agent and technology has a fixed position here. The issue is to communicate and explain the strategy to employees. In contrast, in the perspective of intellectual capital management is a process and to a certain degree a collective endeavour, which performs heterogeneous competencies. Direction is mobilised via metaphors and narratives, and these have to be filled out by creative and intelligent employees that have been made players in the development and application of competencies. Creativity and dedication are not only found with the top management, but also in many places, if not everywhere, in the company.

Assumptions about organisation and management

Table III shows that in a balanced scorecard context, management activities are for the "few", while from the perspective of intellectual capital, they are for the "many", and the content and effects of management work vary.

| | Balanced scorecard | Intellectual capital |
|-----------------------|--|---|
| Idea of strategy | Positioning theory | Competence-based strategy |
| The strategic process | 1) Management sets financial targets and market segments to be aimed at 2) Targets are reached through customers 3) Customer satisfaction is achieved through the “right” generic value chain model 4) To maintain the right value chain model in the future, objectives for learning and growth are set up | 1) Management determines the metaphoric narrative of the firm’s identity and ambition 2) Desired characteristics, capabilities, competencies and relationships are determined 3) Goals and action plans are set up to reach these |
| Strategic aim | The story of future profitability and market position: “What will our market position be in the future?” – “How are we going to compete?” | The narrative of desired future identity: “What do we want to excel at in the future?” – “How are we going to work as an organisation?” |
| Strategic agents | Top management designs value chain processes and activities and translates them to each and everybody in the firm | Management crafts metaphors and narratives of the future, and employees creative innovators and agents of capabilities and competencies |

Table II.
Strategy

The balanced scorecard assumes a very potent – if not omniscient – management, that can see through the firm’s situation and understand the mechanism of its operations in detailed ways. This makes it possible for them to fine-tune organisational arrangements and links. This allows them to construct the firm as a coherent set of activities. In a different mode, intellectual capital start from broad narratives, which may infuse energy and creative into the firm and produce unexpected outcomes. Local initiatives are encouraged, and employees are seen as an element of a systems of competencies where there is on the one hand a coupling between human and structural capital, but also a loose coupling which is developed by “motivation”.

Assumptions about indicators

The role and character of indicators vary between balanced scorecard and intellectual capital. As illustrated in Table IV, these differences play out around causality versus complementarity.

Indicators are interesting because they do not speak for themselves! Balanced scorecard indicators talk about causality because they have been inserted into a system of causal arguments derived from an ambition to construct value chains analytically. However, it is not the indicators themselves that claim causality, it is the design aspirations built around the firm envisaged as a compilations of elements that have to be fitted together in a coherent sequence. Similarly, intellectual capital indicators are spoken for by a voice of competence management, which mobilises concerns for the structure of capabilities and the landscape of their size.

The indicators do not speak for themselves, but they are justified by other plots which typically are related to theories of strategy. The coherence of the indicators is therefore not in themselves but only as involved in a framework, a language or a horizon, which take their meaning and significance in a certain direction. The

| | Balanced scorecard | Intellectual capital |
|---------------------------------------|--|--|
| Central strategic management task | To position the firm in the market and to construct the value chain | To build an organisation that can develop products and meet customer needs which have not yet been recognised |
| Management work | Management controls the firm through the design of the value chain. Focus is on controlling pricing and production costs | Management controls the firm by supporting their own and employees' creativity and motivation and build collective assets that are combined and made to co-operate |
| Competencies | Competence is skill that is designed to fit current customers' demand | Competence is an organisational strength that shows up in any combination of markets and customers |
| Competence development | Competence necessary to fit people and internal processes to each other | Competence development necessary to strengthen the realisation of the ambition found in the knowledge narrative |
| Organisational and management effects | Through analytical considerations management determines where the organisation has to perform well. These considerations are translated to each and every individual through a series of personal scorecards | Management decides on knowledge, capabilities and competencies in which the company wishes to excel in the future. The translation into practice involves a large group of employees |

Table III.
Organisation and management

| | Balanced scorecard | Intellectual capital |
|--|---|--|
| The coherence of the model of indicators | Search for causality between indicators in the four perspectives in order to arrive at a "forecast" of the firm's financial future | Search for complementarity between knowledge resources and competencies in order to realise the firm's narrative of knowledge management |
| Relation between indicators and practice | Cause-and-effect relationships underscore the desire to create a coherent cybernetic model of all relevant decision variables to be used in "simulations" | Efforts to produce a "serious attitude" towards work as an organisation that couples various kinds of capital (both human and technological) |

Table IV.
Indicators

indicators of the balanced scorecard tend to show the company as a "mechanical" system pulling it around competitors and customers with a view to forecasting the firm's financial result. Every individual and organisational unit is assigned a position via the corporate balanced scorecard and its translation into personal scorecards. For intellectual capital, the meaning and significance of indicators is compared to an "organic system" where they will play a part in surveying and justifying the firm's steps towards becoming a more capable organisation. Here, efforts around elements such as dedicated, motivated, knowledgeable employees and routines, systems and relations constitute organisational competence and knowledge.

Conclusion

Balanced scorecard and intellectual capital are performance management systems which integrate financial and non-financial indicators and are tightly coupled to the firm's strategy. Often, they are presented as largely similar or even identical. However, analysing texts about balanced scorecard and intellectual capital a more varied impression is formed. If the texts are followed, it seems that the indicators and the four perspectives mobilised by balanced scorecard and intellectual capital are but a fragment of their arguments. The indicators are shaped according to the purpose they are to serve, and this purpose is found in two different strategies: competitive advantage strategy and competency strategy. They differ in their perspectives on value construction, where the competitive advantage approach heralds markets, customer and rivals as primary elements of value production, while the competency perspective focuses on the internally-generated, historically-forged competencies and capabilities that have a long time horizon. According to the competitive advantage approach value comes from manoeuvring the marketplace, while for competence strategy, value derives from techno-organisational capabilities. This has consequences, one being that the balanced scorecard indicators are said to cohere in a sequential structure of cause-and-effect, while for intellectual capital, the indicators are bundles and form a network around capabilities and their development.

So, there are differences. Do they matter? First, it is clear that strategy is not a simple and innocent matter. Strategy does not have a referent by itself, but this referent has to be explained and justified. Strategy therefore is a problem rather than a solution, and as a theme, strategy has important variations. Second, the indicators are constructive. This means that "the world" is only accessible if it somehow has been made communicable – indicators are indispensable for this end. Indicators are not innocent, but are the only means that we have to talk about the world and make it real to us. Therefore, even if the indicators present loosely coupled numbers, they are the language that brings forth "balance" and "intellectual resources". Therefore, indicators are the avenue to the "world", but they are also already spoken for through the theory of strategy that has been imposed on them. Numbers do not speak freely – they are spoken for, and their object is fabricated outside the measurement system itself. The indicators therefore underscore a framework, language or perspective established elsewhere – they do not expose them or reveal their "true nature".

Notes

1. We acknowledge, obviously, that a text may have different meanings, that a reader may have different purposes and presents it according to these, that a text cannot be exposed in its entirety and may not have a deep essential message. This is the more popular points from poststructuralist thought. We are not trying to "deconstruct" the texts that we read because we are not trying to find "hidden truths", incoherent arguments, and unacknowledged conditions for their being written.
2. It has been pointed out that the balanced scorecard has similarities with the French measurement system *tableau de bord* (e.g. Epstein and Manzoni 1997, 1998; Lebas 1994) and the Performance Measurement Pyramid (Lynch and Cross, 1995); and other authors (e.g. Maisel, 1992) have also published articles similar to Kaplan and Norton (1992). It is, however, outside the scope of this paper to discuss the origins of the balanced scorecard.
3. Kaplan and Norton (2001, p. 97) mention that the learning and growth perspective is about competencies. However, its power is determined by the requirement of the other

perspectives and therefore it does not have an outgoing power in terms of defining relevant capabilities.

4. Firms, particularly in Scandinavia, have published intellectual capital statements as a mechanism to show the value of their intellectual capital (see Petty and Guthrie, 2000; Stewart 1997; Sveiby 1997; Edvinsson, 1997; Edvinsson and Malone, 1997; Brooking 1997; Roos *et al.*, 1997; Mouritsen *et al.*, 2001a; Larsen *et al.*, 1999).
5. This three-way split does have certain problems – it neither describes nor prescribes intellectual capital usefully (Mouritsen *et al.*, 2001b) – which, however, will not be elaborated in this paper.
6. This was not the case in 1996, where the implementation of balanced scorecard was said to be a simple matter. When top management had decided on the balanced scorecard indicators they could be implemented by a letter to middle managers (Kaplan and Norton, 1996c, p. 82)!
7. This is a matter of degree. Top management is not beyond power in the perspective of intellectual capital, but it is seen to create flows of organisation that connect between the customer and the firm's employees more rather than less directly.
8. Sometimes learning and growth are presented as direct causes of internal processes (Kaplan and Norton, 2001, p. 70), while in other situations it is presented as much more indirect (Kaplan and Norton, 2001, pp. 42-3).
9. This is not to say that correlation does not exist, and that causality may be inferred (Johansen *et al.*, 2001). But in such situations, causality is a local brief story about temporary relations between certain indicators. Not a global one, and not one that cannot change. For example, some managers say that employee satisfaction leads to customer satisfaction which again leads to profitability. However, when these managers are asked whether this means that when figures are red that then they will invest heavily in human resource development, the answer is typically no. They will do the opposite and cut down on staff and staff training. What appeared to be a piece of causality turned out to be a very brief story, that could not withstand problems of profitability.

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