Intellectual liabilities: lessons from *The Decline and Fall of the Roman Empire*

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Abstract

Purpose – Intellectual capital theory and practice predominantly focus on measuring and managing intangible assets. However, if one wants to balance the intellectual capital books, one should recognise both intellectual assets and intellectual liabilities. Therefore, the purpose of this article is to present a theoretical framework for measuring intellectual liabilities.

Design/methodology/approach – Identifying intangible liabilities is identifying the risk of the decline and fall of organisations. One of the first extensive studies related to the causes of decline and fall is Gibbon's *The Decline and Fall of the Roman Empire*. It seems as if the main lessons that were drawn from the study are also applicable to today's business environment. Therefore, the framework that is developed here is based not only on intellectual capital literature, but also on Gibbon's study into the causes of the decline and fall of the Roman Empire.

Findings – The findings are combined in a framework for measuring intellectual liabilities. The main distinction within the proposed framework is the distinction between internal and external liabilities. Internal liabilities refer to the causes of deterioration that arise from the sources of value creation within the organisation. External liabilities refer to the causes of deterioration that come from outside and are beyond the control of the organisation.

Originality/value – The article explores a relatively new topic (intellectual liabilities) from a perspective (historical sciences) that is rarely used in management science.

Keywords Intellectual capital, Assets, Liabilities, Business failures

Paper type Conceptual paper

> As long as the Colossus stands, Rome shall stand; when the Colossus falls, Rome will fall; when Rome falls, the world will fall (Saint Bede, 672-735).

1. Introduction

The above epigram refers to a colossal statue of emperor Nero (54-68 AD) in the centre of the city of Rome, near the Collosseum. This statue was seen as a physical symbol or indicator of the strength of the Roman Empire. What is interesting about Bede's epigram is that he did not only address the supposed strength of the Roman Empire, but also the possibility of decay and its consequences. Management literature and research has the tendency to focus on the bright side of organising. Management sciences are predominantly "in search for excellence" (Peters and Waterman, 1982) and therefore focus on the attributes of organisational success. Relatively few focus on the issues related to organisational decline or organisational failure (Van Witteloostuijn, 1998). That this is still the case, can easily be illustrated by a simple search of the

VINE: The journal of information and knowledge management systems
Vol. 39 No. 1, 2009
pp. 92-104

0305-5728
DOI 10.1108/03055720910962470

internet (April 8, 2008). Whereas "high performance organisations" resulted in 45,000 hits, "low performance organisations" resulted in only 319 hits. Whereas "organisational excellence" resulted in 124,000 hits, "organisational failure" resulted in 14,600 hits. Although the issue of organisational failure seems to gain some ground, the dominant focus on success remains. The aim of this article is to contribute to the relatively small body of knowledge about the issues that contribute to the decline in organisations.

A review of the literature related to intellectual capital (IC) measurement reveals a similar tendency. The intellectual capital literature is based on the presupposition that intellectual capital replaced tangible and financial capital as the most important source of competitive advantage. If we accept as true that intellectual assets have become more important than tangible and financial assets, then we should also accept that intellectual liabilities (IL) have become more important than tangible and financial liabilities. However, intellectual capital literature hardly addresses the issue of measuring intellectual liabilities (Canibano *et al.*, 2000; Catasús and Grojer, 2006). A similar search of the internet resulted in 235,000 hits for "intellectual assets" and only 86 hits for "intellectual liabilities". This result could imply that the tendency to focus on the bright side of organising in intellectual capital literature is even stronger than in management literature in general.

Although some studies demonstrate the possibility of the existence of intellectual liabilities in the constitution of intellectual capital (Harvey and Lusch, 1999; Caddy, 2000), the importance still seems to be underestimated (Abeysekera, 2005). Although several recent research projects take liabilities into account (Abeysekera and Guthrie, 2005; Ismail, 2005; Jepson and Ross, 2006; Tsai and Hua, 2006), this is certainly not (yet) mainstream IC measurement. This article contributes to the further development and operationalisation of the concept of intellectual liabilities.

Most IC studies justify their relevance by arguing that managers should be able to identify and measure future success. In the same line of reasoning, it is also relevant for managers to identify failure. "There is little point in showing a balance sheet full of stored 'future economic benefits' if those benefits are not off-set by a reasonable set of liabilities that could also occur in the future" (Tollington, 1995; in: Harvey and Lusch, 1999, pp. 91-2). Only disclosing intellectual assets "is a process undertaken to benefit the aspirations of the firm, rather than providing a way of improving the quality of information shared with stakeholders" (Abeysekera, 2005, p. 6). In addition, only communicating the upside feeds the suspicion that IC is merely an act of window dressing. In this sense, current intellectual capital measurement practice suffers from a similar shortcoming as financial accounting.

The problem with intellectual liabilities is that although they usually go unrecognised, they can force multinationals into bankruptcy (e.g. Enron, Arthur Andersen, Worldcom, etc.). The success of organisations is to a large extend determined by the ability to deal with issues that can possibly lead to failure. Not all intellectual liabilities need to have fatal consequences, but increased awareness about their existence and their effect on a firm's performance, enhances a firm's ability to effectively manage their intellectual capital. "Exercises in gathering and analysing information surrounding existing as well as possible intangible liabilities raises the firm's awareness of potential problems" (Jepson and Ross, 2006, p. 52). In order to make this possible, we need to expand the traditional interpretation of the concept of

intellectual capital. Furthermore, in the tradition of the IC movement, we need to develop new management tools and techniques that describe what they are and how to deal with them (Drucker, 1993; Stewart, 2002).

Although the message that a company possesses substantial unrecorded liabilities might be uncomfortable, it must be told in order to improve the ability of organisations to anticipate on the risk of failure (Harvey and Lusch, 1999). Therefore, the aim of this article is to develop a theoretical framework for measuring intellectual liabilities in order to contribute to the ability to measure the issues that contribute to organisational decline.

As the study of history has a long tradition in studying the phenomenon of decline, I will design the framework based on lessons from historical research, in particular the lessons that were drawn by Edward Gibbon (2003) with regard to the decline and fall of the Roman Empire. Whereas the Colossos was seen as an indicator of deterioration of the Roman Empire, the aim of this article is to search for statues that indicate deterioration in contemporary organisations. In intellectual capital literature and research, these visible signs, or indicators, are called intellectual liabilities.

2. Intellectual liabilities

The term intellectual capital has numerous interpretations and definitions. Based on a comparison of the most influential interpretations, Bontis (2002) proposed to conceptualise intellectual capital as a combination of human capital, structural capital and relational capital. In today's intellectual capital literature and research, Bontis' interpretation seems to get accepted as a standard more and more. Important elements within Bontis' and other interpretations of IC are that they define intellectual capital as a set of different types of assets (or capital) that in combination create value (wealth, profits) (Andriessen, 2004; Stam, 2007). This focus on assets and value creation seems to be a classical example of the dominant focus on success in management literature and research. As a consequence, most IC reporting initiatives are "pro value" (Jepson and Ross, 2006) in the sense that they only measure intellectual assets.

Based on accounting theory, distinction can be made between assets and liabilities. An asset generates a future economic benefit. Intangible assets are defined as assets that lack physical substance but which are likely to yield future benefits (Canibano *et al.*, 2000). Intangible assets that are not reflected on the balance sheet should be interpreted as intellectual assets; the value created by the intellectual assets is then called intellectual capital (Tsai and Hua, 2006). In order to support management and organisations in revealing their hidden value, intellectual capital measurement should address both intellectual assets and intellectual liabilities (Harvey and Lusch, 1999; Caddy, 2000). As the existing interpretation of IC does not take the issue of liabilities into account, we need to reconsider the above interpretation of intellectual capital.

But what then are intellectual liabilities? In general, a liability refers to anything that is a hindrance, anything that causes a disadvantage. In accounting terms, a liability represents a future obligation. Whereas intellectual assets are seen as the main source of competitive advantage, intellectual liabilities should be seen as the main source of competitive disadvantage. Whereas assets refer to strengths, liabilities refer to weaknesses. Whereas assets refer to success, liabilities refer to failure. Whereas intellectual assets are oriented towards wealth creation, intellectual liabilities are oriented towards its destruction. As the concept of intellectual capital builds on the concept of

financial accounting, intellectual assets are usually interpreted as non-physical claims to potential future benefits. In this line of reasoning, the concept of intellectual liabilities should be interpreted as potential non-physical causes of organisational deterioration.

The fact that intellectual capital is usually equated with assets and value creation, does not mean that the issue of intellectual liabilities remained completely unnoted. Like intellectual capital in general, several authors illustrate the existence of intellectual liabilities by referring to the market-to-book ratio. According to Bontis *et al.* (1999) the proof of existence of intellectual assets is the fact that it is very common for companies to be valued more than their net assets would justify. "At the same time, some companies are trading below book value, which might be suggestive of the existence of 'intellectual liabilities'" (p. 392). Tsai and Hua (2006) argue that "if the book value of equity is the difference between the accounting value of the firm's assets and its liabilities, and the market value of the equity is the difference between the market's valuation of its assets and its liabilities, then the market value of the equity minus its book value of equity must represent the net value of its unrecorded (intangible) assets once its unrecorded liabilities have been deducted" (Canibano *et al.*, 2000, in Tsai and Hua, 2006). In line with this reasoning, and based on incidents like Enron, Arthur Anderson and WorldCom, Ismail (2005) argues that intellectual capital cannot only be made up of intellectual assets, but must be a mixture of both intellectual assets and intellectual liabilities.

The first authors to explicitly address the subject of intellectual liabilities were Harvey and Lusch (1999) and Caddy (2000). According to Harvey and Lusch (1999) it is myopic to assume that all intellectual capital translates into a corresponding rise in equity:

> Where are the intangible liabilities that are being accrued along with the potential benefits from the intellectual capital? (. . .) In addition to a host of unrecorded intangible assets the firm claims, it most likely also has a significant unrecorded set of intangible liabilities (pp. 86-7).

In order to identify intellectual liabilities Harvey and Lusch developed a classification model and a six-step process to assess the magnitude of each IL. Caddy (2000) builds on the work of Harvey and Lusch (1999), and defines intellectual capital as intellectual assets minus intellectual liabilities (IC = IA−IL):

> If money capital is measured indirectly by subtracting liabilities from assets, then why should intellectual capital be any different? (p. 137).

If this equation is true, then we should develop a methodology that allows firms to identify the existence of intellectual liabilities. However, the measurement and valuation of intellectual liabilities suffer from the same problems facing the measurement and valuation of intellectual assets. How to measure the value of a bad idea? How to measure bad practice? How to measure inferior earning power? Therefore, Caddy (2000) proposes to assume, although somewhat conservative, that any intellectual liability is life threatening to the organisation. This assumption implies that organisations should mobilise all appropriate intellectual assets to eliminate or at least minimise the impact that the liability could have:

> This (. . .) means that the strategic focus of an organisation in this area changes from merely accumulating and developing the assets to, in addition, recognising and minimising the impact of intellectual liabilities (p. 130).

The concept of intellectual liabilities refers to the idea that intellectual capital, while creating value, also has "a few thorns and thistles that if unchecked can eventually cause more harm than good" (Jepson and Ross, 2006, p. 47). These are the so-called negative value consequences (Cuganesan, 2005), negative intellectual capital (Catasús and Grojer, 2006), negative drivers of value creation (Viedma Marti, 2003), contradictory value drivers (Abeysekera, 2006) or competitive disadvantages (Powell, 2001). Despite these acknowledgements of the existence of intellectual liabilities, the majority of existing IC models keep focusing on assets and do not account for liabilities. Measuring intellectual liabilities helps organisations to improve their performance by turning uncontrollable circumstances to their advantage (Abeysekera, 2006).

Some authors warn for the concept of intellectual liabilities and the comparison of the concept of intellectual capital with the accounting term capital. These authors stick to the traditional interpretation as described above and equate intellectual capital with assets:

> Trying to compare the management term "intellectual capital" to the accounting "capital" (...) is a misunderstanding of the intellectual capital = intangible assets concept and evolution (Axtle Ortiz, n.d.).

According to Andriessen (2001) the discussion about intellectual liabilities is an illustration that some try to push the concept of intellectual capital in the direction of the accounting system. The aim of intellectual capital methodologies is to "discover the key value drive[r]s in the business and offer information that supports decision making" (p. 211). However, it is exactly the latter why we should recognise intellectual liabilities. Recognising liabilities is not to push the concept in the direction of the double-entry bookkeeping system, but to provide management and stakeholders with more reliable information about unrecorded intangible resources. As long as the management is unaware of liabilities, it cannot anticipate deterioration. As long as stakeholders are unaware of liabilities, they cannot truly assess the value of the firm:

> Merely identifying and summing intellectual assets for an organisation provides (to varying degrees) an incomplete picture (Caddy, 2000, p. 142).

An intellectual capital report that only measures intellectual assets can be compared with a financial report that only measures financial assets. In order to create a fair (more balanced) picture of an organisation's intellectual capital, we should not only measure intellectual assets, but also intellectual liabilities. Therefore, in addition to a framework for measuring intellectual assets, we also need a framework for measuring intellectual liabilities. IC measurement tools should not only measure assets, but also liabilities in the sense that it "provides hints as to what is going wrong in a given organisation, and should thus point to the presence of certain flaws (or intellectual liabilities) that are undermining the firm's potential for intellectual value creation" (Viedma Marti, 2003, p. 221).

3. Lessons from the decline and fall of the Roman Empire

Unlike management research, the study of history has a rich tradition of investigating the phenomenon of decline and fall. In particular the decline and fall of civilizations. Famous examples are Oswald Spengler's *Der Untergang des Abendlandes* (*The Decline*

of the West) (1918) and Arnold J. Toynbee's *A Study of History* (1961). An early example of these type of studies is Gibbon's *The Decline and Fall of the Roman Empire* (Gibbon, 2003). In the six volumes of this work, which were published between 1776 and 1788, Gibbon covers the history of the Roman Empire from the first century to the fall in both the West (*ca* 500) and the East (1453). At the end of his work he gives some general causes of decay and destruction. It appears that the main lessons that were drawn from this study can contribute to a better understanding of the main causes of deterioration of organisations, and thus the concept of intellectual liabilities.

In line with Saint Bede's epigram at the beginning of this article, Gibbon measured the decline of the Roman Empire by comparing the visible remains of important edifices in Rome as observed by different authors throughout history. He compared the remaining numbers of theatres, baths, palaces, arches and columns as observed throughout time, deduces the state of decline at the time of the observation and the speed of decline between the different observations. Besides the ascertainment of the decay Gibbon tries to give an explanation of the causes. In the final chapter of his study, he identifies four principal causes of the ruin of Rome. To illustrate these causes, Gibbon applies them to the Colosseum. This amphitheatre in the centre of the city of Rome is one of the greatest works of Roman architecture and engineering, and therefore an iconic symbol of the Roman Empire. The four causes of decay are:

(1) *The injuries of time and nature*. These are the natural forces that impinge from outside, like earthquakes, fires and floodings. These forces are usually not caused by man.

(2) *The hostile attacks of the Barbarians and Christians*. This second cause refers to the destruction that was (deliberately or not) caused by armies that fought the Roman rule and ancient paganism.

(3) *The use and abuse of the materials*. Throughout time, the edifices of Rome were seen as a rich mine of natural resources like marble, bronze, lead, iron, copper, etc. This source of decay was caused not only by external forces, but also by the Romans themselves.

(4) *The domestic quarrels of the Romans*. According to Gibbon, discord among the Romans themselves was the most powerful source of decay.

According to Gibbon, internal struggles were the most powerful cause of decay:

> When we compare the days of looting of strangers with the centuries of internal hostilities, we can only conclude the latter to be the biggest cause of decay. Neither time, nor Barbarians can claim this magnificent piece of destruction: it was completed by its own people (Gibbon, 1981, p. 247, translation CS).

A review of Gibbon's four causes of decay learns that a distinction can be made between internal and external causes of deterioration. With regard to the latter, distinction can be made between the force majeure (forces of nature) and "normal" competitive forces (hostile attacks). With regard to the internal causes of deterioration, distinction can be made between the misuse of available resources and the internal struggle for power (domestic quarrels). According to Gibbon, the internal causes were the most powerful causes of decay and enhanced each other as the destructions that were caused by domestic quarrels were restored by the misuse of materials of ancient edifices.

4. A framework for measuring intellectual liabilities

The past 15 years, many frameworks (monitors, scoreboards, navigators, etc.) have been developed to identify and measure intellectual capital (Andriessen, 2004). In fact, all these frameworks merely identify and measure intellectual assets. Therefore, the question now is: how can we identify and measure intellectual liabilities, so that we can complement our intellectual capital measurements?

Before answering this question, we should first redefine the concept of intellectual capital. If we accept as true that IC = IA−IL (Harvey and Lusch, 1999; Caddy, 2000), then we should also apply this equation to the different types of intellectual capital. To be more precise, human capital is not the sum of all human assets, but the sum of all human assets minus the sum of all human liabilities (HC = HA−HL). As this reasoning is also valid for structural capital (SC = SA−SL) and relational capital (RC = RA−RL), we should define intellectual capital as:

$$IC = (HA - HL) + (SA - SL) + (RA - RL).$$

This definition is a further specification of the framework as proposed by Bontis (2002). Based on the above equation, Table I provides an overview of the components that count up to intellectual capital.

So how do we translate this logic to a framework for measuring intellectual liabilities? The most important effort to draw up such a framework, has been Harvey and Lusch's (1999) classification of intellectual liabilities. In this classification they make, on the one hand, a distinction between internal and external liabilities. On the other they make a distinction between four types of intellectual capital (process, human, informational and configuration issues). These two perspectives on liabilities are combined in a 2 × 4 matrix. This classification scheme encounters two important obstacles. First, in order to connect to existing intellectual capital literature and research it is important to accept Bontis' (2002) proposed conceptualisation in which a distinction is made between human, structural and relational issues. Second, it can be questioned whether it is possible to combine both perspectives (internal-external versus different types of IC) into one classification scheme. In particular the external perspective is difficult to relate to the different types of intellectual capital. In fact, Harvey and Lusch's (1999) external perspective represents relational liabilities, which are difficult to combine with human and structural liabilities.

However, this does not necessarily mean that we should not use the internal-external distinction. As we have seen above, the main distinction that can be made between the causes for the decline and fall of the Roman Empire is that some of the forces impinge from outside and others come from within. In other words, some are external and others are internal. Therefore, the internal-external distinction should be maintained, however, it should not be directly related to the different types of intellectual capital.

Table I. Overview of the components that count up to intellectual capital

Human assets	−	Human liabilities	=	Human capital
Structural assets	−	Structural liabilities	=	Structural capital
Relational assets	−	Relational liabilities	=	Relational capital
Intellectual assets	−	Intellectual liabilities	=	Intellectual capital

But how then should we classify the different issues into one model that supports the management in identifying, measuring and managing intellectual liabilities? Figure 1 presents a new framework, inspired by Harvey and Lusch's (1999) internal-external distinction, Bontis' (2002) proposed conceptualisation of intellectual capital and Gibbon's (1782) causes for the decline and fall of the Roman Empire.

The main distinction within this classification scheme is the distinction between internal and external liabilities. Internal liabilities refer to the causes of deterioration that arise from the sources of value creation within the organisation. External liabilities refer to the causes of deterioration that come from outside and are beyond control of the organisation.

The two types of external liabilities are derived from Gibbon (1782) who makes a distinction between "injuries of time and nature" (fire, flooding, earthquake) and "hostile attacks of Barbarians and Christians". Translated to today's business environment these issues could be interpreted as "*force majeure*" and "market liabilities".

Force majeure refers to the risk of deterioration as a result of circumstances that are completely beyond an organisation's control. They are usually unexpected, difficult to foresee and difficult to anticipate on. In today's organisational environment, this type of liabilities can be threats of natural, demographic, economic, social or political nature. Examples are global warming, the ageing population, the depletion of natural resources, product tampering and other acts of terrorism, political instabilities, financial and economic crises (e.g. the current sub-prime crisis), strikes and other social unrests, boycotts (e.g. the Danish cartoon boycott). All these issues are potential detriments to an organisations ability to create value.

Market liabilities, the second type of external liabilities, refers to the risk of deterioration as a result of the normal competitive forces in the market. This type of liabilities is also beyond control of the organisation, however they are not (or should not be) unexpected. Examples of this type of liabilities are the industry life cycle (Klepper, 1997), crowded markets or population density (Mellahi and Wilkinson, 2004), strong and successful competitors, new players in the market, technological innovation leading to creative destruction (e.g. the internet) and substitute products or services.

Internal liabilities are the causes of deterioration that arise from the sources of value creation within the organisation. According to Gibbon (1782), the internal forces of decay were much stronger than the external. Whereas Gibbon referred to tangible materials like stone and iron, misuse in today's organisational environment would refer to intellectual sources of value creation like human capital, structural capital and relational capital. The related liabilities are called human liabilities, structural liabilities and relational liabilities.

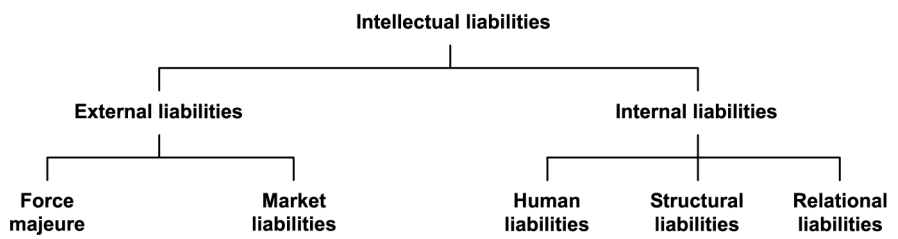

Figure 1.
Framework for measuring intellectual liabilities

First, human liabilities are the causes of deterioration that arise from the human resources within the organisation, the employees, their tacit knowledge, skills, experience and attitude. Examples of human liabilities are high employee turnover (Harvey and Lusch, 1999), the risk of losing key employees (Jääskeläinen, n.d.), internal competition (Pfeffer and Sutton, 2000), the not-invented-here syndrome (Weggeman, 1997), and inadequate training/development (Harvey and Lusch, 1999; Abeysekera, 2006).

Second, structural liabilities refer to the causes of deterioration that arise from the non-human resources (those sources of value creation that stay behind, after the employees have left the organisation) like codified knowledge, procedures, processes and culture. Based on literature about organisational failure, Mellahi and Wilkinson (2004) provide an overview of structural liabilities: the liability of newness, the liability of smallness, group think, top management homogeneity, long management tenure, and past performance. Other examples of structural liabilities are weak strategic planning processes (Harvey and Lusch, 1999; Caddy, 2000), a poor information or knowledge infrastructure (Harvey and Lusch, 1999), orphan knowledge (Caddy, 2001; Cuganesan, 2005), the cost of ignorance or cost of not knowing (Davenport, 1997; Pollard, 2004), domestic quarrels or struggle for power (Gibbon, 1782), bureaucracy and organisational inertia (Lorenz, 1994; Van Witteloostuijn, 1998), social rigidities and organisational sclerosis (Olson, 1965, 1982), a knowing-doing gap (Pfeffer and Sutton, 2000), a knowledge unfriendly culture, and a hierarchical or complex organisational structure (Weggeman, 1997).

Third, relational liabilities refer to the causes of deterioration that arise from the relationship with customers, suppliers and other external stakeholders. A relational liability means that an organisation is not able to maintain confidence in its reputation. In general, relational liabilities can be summarised as poor corporate reputation (Caddy, 2000). More specific examples of relational liabilities are given by Harvey and Lusch (1999): bad word of mouth, poor product or service quality, high relational turnover, potential product liability suits, lack of strategic alliances. Finally, Mellahi and Wilkinson (2004), also refer to relational complexity (complex linkages within the firm and with external bodies) as a potential liability to the success of organisations.

Table II provides an overview of possible intellectual liabilities. In his search for negative intellectual capital in order to predict financial distress, Catasús and Grojer (2006) conclude that "the variation of possible variables and indicators are nearly endless" (p. 17). Therefore there is no sense in formulating a fixed list of intellectual liabilities. The combination of value creating resources is unique in each organisation. As a consequence the forces that cause deterioration of a firm's performance are unique too. However, as Skandia in the early 1990s started the development of their Navigator by drawing up a list of 164 indicators that referred to intellectual assets (Edvinsson and Malone, 1997), the process of designing a framework that measures intellectual liabilities could benefit from drawing up a list of possible liabilities. The list of intellectual liabilities as suggested above could serve as a start.

5. Conclusion

Management research has a tendency to search for excellence and the causes of success. The prevailing interpretation of IC reflects a similar tendency. As a consequence, intellectual capital is usually equated with assets and value creation. In

	Intellectual liabilities				
	External liabilities		Internal liabilities		
Force majeure	Market liabilities	Human liabilities	Structural liabilities		Relational liabilities
Global warming	Industry life cycle	High employee turnover	Liability of newness		Poor corporate reputation
Ageing population	Crowded markets	Risk of losing key employees	Liability of smallness		Bad word of mouth
Depletion of natural resources	Successful competitors		Group think		Poor product or service quality
Product tampering and other acts of terrorism	New players in the market	Internal competition	Top management homogeneity		High relational turnover
Political instabilities	Technological innovation, leading to creative destruction	Not-invented-here syndrome	Long management tenure		Potential product liability suits
Financial and economic crises	Substitute products or services	Inadequate training and development	Past performance		Lack of strategic alliances
Social unrest			Weak strategic planning process		Relational complexity
Boycotts			Poor information or knowledge infrastructure		
			Orphan knowledge		
			Cost of ignorance		
			Struggle for power		
			Organisational inertia		
			Organisational sclerosis		
			Knowing-doing gap		
			Knowledge-unfriendly culture		
			Complex organisational structure		

Table II.
Overview of possible intellectual liabilities

order to balance the intellectual capital account, we should not only account for the intellectual assets, but also the intellectual liabilities. Therefore, intellectual capital should be defined as intellectual assets minus intellectual liabilities (IC = IA−IL) (Harvey and Lusch, 1999; Caddy, 2000).

Intellectual liabilities can be defined as potential non-physical causes of organisational deterioration. In order to help organisations to manage these potential causes of deterioration, we should develop an appropriate method that helps to identify and communicate intellectual liabilities. Inspired by the lessons of ancient history (Gibbon, 2003), the aim of this article was to develop a framework for measuring intellectual liabilities.

A review of Gibbon's four causes of decay of the Roman Empire learned that a distinction can be made between external forces that are beyond control (force majeure and market liabilities) and internal forces that are related to the sources of value creation. For the latter I decided to comply with Bontis' (2002) proposed conceptualisation of intellectual capital and thus distinguish between human liabilities, structural liabilities and relational liabilities.

Consequence of this decision, however, is that internal struggles (which is the most powerful cause of decay according to Gibbon) is only an indicator of structural liabilities. If it is true that this force is the main cause of organisational deterioration, it might be considered to emphasise this element more prominently in the framework. More research needs to be done in this area. What is the impact of internal quarrels and internal struggles for power on the performance of an organisation? Is it true that these internal struggles are important causes of decay? Are these causes more important than other causes of decay?

Although intellectual liabilities are indicators of decay, they are not necessarily bad news. Intellectual liabilities should be interpreted as a stimulus for innovation. Whether they are bad news or not, depends on the ability to deal with the situation and the ability to find creative answers to the situation. In this sense, measuring intellectual liabilities contributes to strengthening a firm's knowledge productivity (Stam, 2007).

6. Further research

As the aim of this research project is to help organisations to gain better insight in intellectual liabilities, the next step is to develop a concrete method (solution concept) that supports the management in doing so. As the validity of solution concepts is not only judged by academic rigor, but also by its effectiveness in practice (pragmatic validity), the following step would be to find a context in which the effectiveness of the method can be tested.

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