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CLASSIFICATION OF INTANGIBLES
- SOME COMMENTS

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ABSTRACT: The intangible terminology is widely spread. There exist numerous definitions and classifications for intangible assets, intangible investments, intangible capital and intangible phenomena. One common characteristic of most classifications is, however, the division of the intangibles into human, organisational, and customer categories.

In an organisation, the classification structures aim at assisting the management in identifying the firm specific intangibles so that these can be further developed. On the capital markets the effects of the intangibles are considered twofold. Firstly, the intangibles are taken as an explanation for the difference between market equity value and book equity value. Secondly, the comprehensive public reporting on intangibles is claimed to have a positive impact on the value of market equity.

KEYWORDS: intangibles, classification, measurement, reporting

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Pääomamarkkinoilla aineettomille voimavaroille annetaan kaksi roolia. Ensinnäkin luokittelurakenteiden avulla pyritään selittämään yrityksen markkinan- ja kirjanpitoarvon välistä eroa. Toisaalta katsotaan, että aineetomien voimavaroihin liittyvän relevantin informaation julkistaminen vaikuttaa myönteisesti yrityksen markkina-arvon kehitykseen.

AVAINSANAT: aineeton pääoma, luokittelu, mittaus, raportointi
1 Yhteen veto


Luokittelu on ensimmäinen askel aineettomien voimavarojen käsitteen ja sisällön ymmärtämiseen. Luokittelu yksin ei kuitenkaan riittä. Aineettomien voimavarojen hallinta edellyttää osaavaa johtamista sekä mitattua- että raportointikäytäntöjen kehitystä.


Mielenniintoisia ovat myöskin Ernst & Youngin tutkimustulokset, joiden mukaan sijoittajat – tässä tapauksessa analyytikot – arvostavat aineettomista voimavaroista ennen strategian toteuttamista, johon uskottavuutta, strategian laatua, innovatiivisuutta sekä kykyä osaavien ihmisten palkkaamiseen.

1 Introduction

There are observations that the stock market behaviour of the so called 'knowledge companies' frequently deviates from that of basic industries. There also exists some evidence supporting a positive correlation between a firm's intangibles and its share market value [Amir and Lev 1996, Lev 1997, Lev and Zarowin 1998]. Thus the 'air' between the market and book values of a firm is claimed to reveal its knowledge capital, the stock of intangibles which is not visible in traditional financial accounts, but instead taken into account on an efficiently functioning marketplace.

The ongoing efforts for establishing a general classification for the intangibles thus aim, among other things, at structuring the space between the accounting valuation and (higher) market expectations; at characterising the attributes that make a firm more valuable in public trading than is the value of its accountable assets. Another aim is, naturally, to offer the managers some frameworks for use when identifying the strategically relevant intangibles of their organisations.

The structure of this paper is as follows. Chapter 2 refers to some current classification concepts. Chapter 3 moves from structures to management, measurement and disclosure issues. Chapter 4 concludes with future challenges.

2 Some current concepts for intangibles

There are various approaches to the meaning of the intangible. The actual verbal definitions are quite rare. The intangibles are mainly defined through classification, which reveals a certain content structure.¹

The application environment is the main difference between the existing classifications. Some efforts aim at constructing intangible asset groups suitable for capitalisation on a firm's balance sheet, whereas others concentrate on intangible resources or intangible phenomena, and on the use of the classification as a management tool. If the intangibles are either recognised as assets or reported alongside 'official' financial statements is, however, subject to debate, which logically leads to the question of the valuation principles. If recognised and accounted as assets, the depreciation and impairment issues need to be solved.

☐ International Accounting Standard IAS 38 (IASC 1998) defines intangible assets as identifiable non-monetary assets without physical substance held for use in the production or supply of goods or services, for rental to others, or for administrative purposes that are (a) controlled by an enterprise as a result of past events, and (b) from which future economic benefits are expected to flow to the enterprise.

☐ According to Arthur Andersen (1992) intangible assets are non-physical in nature, capable of producing future economic benefits and protected legally or through a de facto right. For financial reporting purposes it should be possible to define the

¹ For thorough information on different types of structures see Johanson et al. (1999).
intangible asset in such a way that it is sufficiently separable to enable its valuation as an identifiable business asset. Moreover, the basis for the valuation should be defined in sufficient detail that it can be computed consistently over time.

Four most common categories of intangible assets are suggested accordingly: Brands include consumer goods, industrial and service brands, trademarks including name, logo, device and colour combination as well as corporate name. Publishing rights include magazines, book titles, mastheads, film, music and photographic libraries, TV/radio program listings, copyrights, imprints, subscriber/advertise lists and exhibition rights. Intellectual property includes patents, copyrights, trademarks, technology, know-how, trade secrets, product design/style, databases, software as well as drawings and blueprints. Licences include TV/radio franchises and licences, airline routes and slots, production rights, import quotas, operating licences (e.g. transport), mineral exploitation, franchise operations, distribution rights, licences of the rights (e.g. pharmaceutical) and non-complete agreements.

- The Intangible Research Center of the Leonard N. Stern School of Business defines and classifies the intangibles in conformity with GAAP\(^2\). According to the broad definition intangibles are nonphysical sources of probable future economic benefits to an entity or alternatively all the elements of a business enterprise that exist in addition to monetary and tangible assets. Narrow definition defines the intangibles as nonphysical sources of probable future economic benefits to an entity that have been acquired in an exchange or developed internally from identifiable cost, have a finite life, have market value apart from the entity, and are owned or controlled by the entity.

These two definitions result in six classes of intangibles: General, which means goodwill and others, e.g. advantageous relationships with the government. Brand Equity meaning the capacity of brands to sustain and encourage economic demand and other market capabilities, such as advertising. Intellectual Capital including trade secrets, internally developed computer software, drawings and other proprietary technology as well as intellectual property (patents, trade names, trademarks, copyrights) which exist because of a complex body of law. Structural Capital including assembled workforce (the relationship between the business and its employees, training and employee contracts), leadership, organisational capacity for sellable innovation, organisational learning capacity, leaseholds, franchises, licenses and mineral rights. Customer Equity, which means customer lists and other customer-based intangibles, customer loyalty and satisfaction as well as distribution relationships and agreement. Supplier Relations including equity interest in suppliers, contracts and supplier reliability.

- Brooking (1996) defines the intangibles through another four categories: Human-centred assets including education, skills, job related expertise as well as personal and job related attributes. Human-centred assets thus comprise the collective expertise, creative capability, leadership as well as entrepreneurial and managerial skills embodied by the employees of the organisation. It also includes psychometric data and indicators on how individuals may perform in given situations such as

\(^2\) GAAP = Generally Accepted Accounting Principles
high stress. Intellectual property assets include know-how, copyright, patent, semiconductor topography rights, and various design rights. They also include trade- and service marks. Infrastructure assets include among others information systems, management infrastructure, financial management methods, corporate culture, forecasting methods and risk analysis. In other words, these are the technologies, methodologies and processes which make up the way the organisation works. Market assets refer to name recognition, repeat business, branding as well as customer and investor relations thus defining the potential of an organisation in terms of market-related intangibles.

- Sveiby (1997) classifies the intangible assets defined as a stock price premium in three groups: External structure, such as brands, customer and supplier relations. Internal structure meaning the organisation: the management, legal structure, manual systems, attitudes, R&D and software. Individual competence includes education and experience.

- Probably the most popularised structure for intangibles (figure 1) owes to the Swedish assurance group Skandia, and its former Director of Intellectual Capital, Leif Edvinsson.

**Figure 1  Intellectual Capital and Skandia Navigator**

![Diagram of Intellectual Capital and Skandia Navigator](image)

Source: Skandia (1994)

Skandia’s Intellectual Capital (IC), defined as the difference between the firm’s market and book values, is currently divided into three subsections: human capital,

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3 The difference between the firm’s market and book values.

4 Although, the work of Skandia is partly based on earlier concepts, such as Sveiby (1989)
structural or organisational capital, and customer capital. *Human capital* refers to the individual knowledge of the employees, which leaves the company at 4 p.m. *Structural capital* includes the company culture, information channels, and databases, among others. Structural capital is usually owned or directly controlled by the company, and thus continues working after the employees are gone. *Customer capital* aims at capturing the value of loyal customers and external networks.

Roos et al. (1997) still argue in favour of the twofold classification into *human* and *structural* capital, initially suggested by Skandia (1994) as in figure 1. They suggest a further division of these two groups into three subcategories. According to their structure, human capital includes *competence* based on knowledge and skills, *attitude* based on motivation, behaviour and conduct, and *intellectual agility* based on innovation, imitation, adaptation and packaging. Structural capital, in turn, consists of *relationships* including customers, suppliers, alliance partners, shareholders and other stakeholders, *organisation* including infrastructure, processes and culture, and *renewal and development* (figure 2).

**Figure 2 Human and structural capital**

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TOTAL VALUE

FINANCIAL CAPITAL

INTELLECTUAL CAPITAL

HUMAN CAPITAL
COMPETENCE
ATTITUDE
INTELLECTUAL AGILITY

STRUCTURAL CAPITAL
RELATIONSHIPS
ORGANISATION
RENEWAL AND DEVELOPMENT
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Source: Roos et al (1997)

Despite a variety of efforts to date, a generally accepted structure for intangibles is still lacking. One common characteristic - although without any terminological consensus - seems to be the division of the assets into human-related, firm-internal and firm-external phenomena. Still, as Cañibano et al. (1999:11) note "...there seems to be little agreement in the literature as to what exactly intangibles are, when they should be recognised, whether or not they should be reported in the financial statements, how they should be measured, accounted for and depreciated." And further (p. 19): "Academics and standard setting bodies are currently faced with the challenge of
undertaking joint efforts towards developing an appropriate definition of intangibles and a coherent classification which are the necessary starting point for the development of a set of valuation criteria and guidelines for financial reporting of intangibles."

3 From structures to practices: measuring, managing and reporting the intangibles

Why classify? Cañibano et al. (1999:31) verify as follows: "Failure to allocate sufficient resources to relevant intangibles may result in a loss of competitive power and a deterioration of the firm’s financial position in the long run. Therefore, managers need to be provided with an appropriate definition of intangibles and a comprehensive classification thereof." Further (p. 30): "Failure to correctly reflect the impact of intangibles on the current and future performance of the business implies that accounting statements fail to present an unbiased (true and fair) view of the firm’s financial position. Therefore, investors are provided with non-relevant and non-comparable financial statements and will most likely not be able to assess the value of companies to make efficient resource allocation decisions."

The classification is thus the first step to increase understanding. However, for practical purposes it is merely the first step. The value added from intangibles will not be realised until successful implementation of the management and reporting approach. As it is, practically every classification construction leads to some kind of reporting approach. Examples are the IC-reporting framework Skandia Navigator, the Intellectual Assets Monitor summarising the external, internal, and competence indicators from Sveiby’s intangible assets, or the aggregated IC-index by Roos et al. (1997).

Measurement approaches

The measures are generally classified as being monetary or non-monetary. In the group of monetary measures, the intangibles may have value as an asset or they may be regarded either as an investment or as a cost.

Generally, the financial accounting principles differ across countries and areas when it comes to the asset recognition of the intangibles. Some accounting rules allow the capitalisation of e.g. the R&D expenditures, whereas others treat them solely as costs.

On the human capital side, the debate concerning the asset recognition issues started in the 1960’s, as an Ph.D.-candidate noticed that the firm’s financial statement does not reflect the real value of the firm, since important assets, such as human capital, are missing from the balance sheet. The following Human Resource Accounting (HRA) movement concentrated on finding value for company’s personnel, and even on bringing these values to the official financial information [Flamholtz 1995]. This was, however, no great success.

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5 For detailed information see Edvinsson & Malone (1997)
6 For detailed information see Sveiby (1997)
7 For detailed information see Cañibano et al. (1999)
The failure was due to many practical as well as theoretical problems, which were encountered in defining the proper balance sheet value for human capital. Firstly, the control aspect was subject to debate. It is a fact that the firm does not own its employees. The question was, does the firm possess sufficient control over its employees in order to be able to treat them as assets. Secondly, the valuation principles for human assets have been subject to a long-lasting debate. During the past 30 years practically every alternative has been proposed [see eg. Gleeson 1975, Sackmann et al. 1989, Scarpello & Theke 1989]. A proper solution is, however, still lacking. Thirdly, ethical issues were no minor detail. Generally, accounting for the worth of the employees beside the machines was not universally considered as good practice. To date, the human factor is not included in official balance sheet information. There have been some efforts for the construction of a ‘shadow balance sheet’ including the information missing from the real one, again with no great success. Later on, as the general discussion framework has bent from the human resource only towards the intangibles at large, the problem setting has largely remained the same. Recognising e.g. customers or suppliers as assets bears much of the same problems as recognising the employees as assets.

Beside the efforts for the balance sheet valuation, there are numerous propositions for the detailed and informational accounting for the intangibles-related investments and costs. One of these is the human resource profit and loss account, which aims at informing about the detailed HR-related costs and investments and their contribution to the firm’s income.  

Both the value and investment calculation seeks strict financial figures. It seems, however, that the measurement issues have grown to be much more complicated than finding out the firm’s yearly expenditure on R&D or education and training. The question that evidently follows is – so what? What has the firm accomplished by investing this money? There is a growing need for more result-oriented measurement schemata to reveal the outcome and the implications about the use of certain input.

As a result the numerical information is widely complemented with non-financial measurements. As the long discussion around the valuation principles for the human resources indicates, some things just do not convert themselves into dollars or euros. It is, however, possible to establish cause and effect -chains with complementing the financial information with the non-financials: ratios and indicators. The Balanced Scorecard (BSC) by Kaplan and Norton (1996) is a good example of the building of relations between financial objectives and non-financial performance measures.

Some practitioners say that you only can manage something you can measure. Others say the measurement is secondary, one should manage first. In a way both opinions are right. The measures actually take a place between two phases of management. The first management aspect is, one has to know what exactly to measure. The second is, after having dealt with finding the right indicators for the right things, one has to be able to cope with the results. Therefore, it is important to bear in mind that the measures are just a means to an end, not the end itself. The desperate search for right re-

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porting standards for intangibles easily leads to overemphasis of the numbers. The measurement system is a tool, which only gets a life in the hands of a clever user.

*Intangibles and company valuation - disclosure issues*

Measuring and managing – which order ever anyone will choose – are essential for a firm to be able to successfully control, maintain and further develop its intangibles. The proponents of the IC-accounting go still one step further. It is claimed that the informational disclosure of intangibles has a positive impact on the market value of a firm.

Empirical evidence from western stock exchanges actually reveals an increasing trend in market-to-book ratios, the market value of stocks divided by the book value of equity of the listed companies [Eronen 1999, Johanson 1996, Lev 1997]. Some existing evidence also points to the declining value relevance of the financial statements on company valuation [Lev & Zarowin 1998]. Results by Amir and Lev (1996) reveal an increase in the value relevance of the financial figures in a wireless communication industry after these figures are complemented with non-financial information, such as the market penetration. Cañibano et al. (1999) shows a positive correlation between the firm’s investments in R&D and stock price. Eronen (1999) investigated the value relevance of the disclosed human resource indicators using Finnish firm data. In this case the results indicated that the disclosure itself does not seem to be an issue.

The fact that the market capitalisation differs from the accounting value of a firm nevertheless indicates that the investors are considering additional sources of wealth than the balance sheet value of the fixed assets while making investment decisions.

The logic behind the company valuation is simple. The market value of a firm is the number of its shares multiplied by the share price. The share price, in turn, depicts the market’s expectations attached to the firm’s growth and profitability. The size of the market value is thus characterised by two components. Firstly, there is the required rate of return, which adjusts the returns to the risk level of a firm’s stock. The capital asset pricing (CAPM) model represents one possibility to calculate the required return rate. Secondly, there are (expected) returns, or, the future cash flow containing (the investors beliefs regarding) the firm’s income.

The fact that the current accounting rules only cover a minor fragment of the relevant intangibles-related information evidently affects the company valuation. Intangibles that do not appear in the balance sheet have a double impact on the firm’s financial figures. They adversely affect both the book value of equity and the result: the book value is lower (no capitalisation values for intangibles) and the result is lower (intangibles are regarded as costs occurred during the accounting period).

The investors seek for growth and profitability. As it is under current accounting practices, intangibles are supposed to have value, but their value stems from investor’s estimations. One of the reasons behind the promoted disclosure of additional, intangibles-related information is to give the investors a reliable picture of the firm’s future performance. In this way the market gets to know more than it has to guess, which should have a further impact on the expected returns.
4 Challenges – the step forward

One target of the classification of intangibles is to structure the space between the accounting valuation and the (higher) market valuation of a firm. This is due to the fact that currently only a minor fragment of intangibles is recognised as assets; the balance sheet normally includes only the financial and fixed (tangible) assets. If the market continuously values the firm higher than the value of its tangibles, it is claimed the higher valuation is based mainly on the intangible wealth. This is the first thesis of the IC-school.

In addition to structuring the market-to-book difference into intangible parts, the proponents of the IC-thinking claim that a comprehensive public reporting on intangibles does have a favourable effect on the firm’s market value. The recent research actually reveals some evidence on the subject. In some cases, crucial information about company-relevant intangibles does have a reflection at the stock prices as well.

The problem attached to both of these claims is that the intangibles do not exist independently. Value is created through complex interaction between tangible and intangible factors, and all these factors are highly firm specific.

One of the challenges in the future is to try to recognise these firm specific intangibles and their effects both inside and outside the organisation. The task of identifying the relevant intangibles inside an organisation is a management responsibility. This could well be made easier through structural frameworks of intangibles already present in the literature. Widely used examples include the Balanced Scorecard and the Skandia Navigator.

The impact of the different types of intangibles outside an organisation is a research challenge. Researchers have a possibility to tackle the issues on an aggregate level, not having to deal with the day-to-day management challenges. Researches are able to search for the best practices, and distribute this information for wider use.

When it comes to intangibles and capital markets, qualitative research is needed as well. The existing large databases do contain information on past performance and actions. Beside the quantitative proof, it would, however, be interesting to look at how the investors see the firm. The first step might well be to approach the analysts, as reported in Ernst & Young (1999). In this survey the five non-financial metrics most highly valued by the investors were in descending order strategy execution, management credibility, quality of strategy, innovativeness and ability to attract talented people.

One of the problems concerning the capital markets is probably the lack of standards. The investors do not necessarily know what information is genuinely relevant and reliable, and without comparison and background information they do not necessarily know if the given facts are good or bad. One of the general future challenges is thus to train the different stakeholders to search for and use the intangibles-related information.
Initiatives taken by global institutions such as the OECD\textsuperscript{9} to expand the basis for discussion and to enhance the research and development concerning managing, measuring, reporting and controlling the intangibles is a necessary step for wider consensus. Although the 'hard work' is mainly a responsibility of a smaller entity, such as a firm or an academic institute, it is difficult to achieve sustainable results without aggregate level co-ordination.

\textsuperscript{9} An International Symposium "Measuring and Reporting Intellectual Capital: Experience, Issues, and Prospects" was held in Amsterdam 9.-11.6.1999. For more information see http://www.oecd.org/dsti/sti/industry/indcomp/act/Amsterdam/symposium.htm
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