

WORKING PAPER

Reporting Intellectual Capital in Spain

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Abstract

This study reports on the analysis of annual reports from 14-listed companies in Spain over a five-year period, from 1998 to 2002. Companies in the sample are selected on the basis of their knowledge-based assets and incentives to report on Intellectual Capital. The empirical analysis is twofold:

- 1) Firstly, we analyse the value of intellectual capital using a value-based approach, through the difference between market and book value over the period considered. Results show that there is a general decrease in the “hidden value” of these companies, probably due to the general trend in stock markets.
- 2) Secondly, we carry out a content-based analysis of the complete annual reports of the companies over the five year period. Preliminary findings seem to suggest that although the level of disclosure has increased over time, this is mainly in the form of narrative. Overall, the level of disclosure of intellectual capital remains low.

Keywords : intellectual capital, disclosure, Spain.

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Introduction

The development of the knowledge-based economy has led to a change in how companies create value. Whilst, during the industrial period, the ways in which companies created value were based upon the efficient use of physical resources such as raw materials and machinery, in the new economy they are based on more intangible ones such as brands or information systems. The origin of these new business competitive examples is globally covered by the generic term “knowledge”.

Whilst, clearly, “knowledge” has always existed, it has only been in recent decades that the asset has been identified as the main generator of value (Stewart, 1997). How has this change come about? According to Lev (2001), there are two reasons: firstly, due to the increase in business competition arising from globalisation and increasing deregulation of many sectors and, secondly, due to the appearance of new information systems and technological advances. One example of this is provided by Ford, which has, in recent years, embarked upon a process of accelerated vertical disintegration, subcontracting out a large part of its production and selling material assets which are no longer required in its new structure. These changes have allowed the company to return 10 billion euros to its shareholders. Additionally, Ford has invested in the acquisition of intangible assets, above all brands, such as Jaguar, Volvo and Land Rover. This restructuring has only been made possible by the intensive use of information systems and the Internet.

An organisation’s business knowledge can be called by a variety of names, of which “intellectual capital” and “intangible assets” are the most common. With a few small exceptions, it can be said that these two expressions are practically synonymous. Thus, a company’s intellectual capital will include elements such as the know-how and abilities of its workers, experience, information and the structure or learning capacity of the organisation. A formalised definition of intangible assets is provided by Itami (1994), who describes them as “the result of incorporating information and know-how into a organisation’s productive activities, including that tacit and explicit knowledge which generates economic value for the company”.

The purpose of this article is, firstly, to highlight the failings of traditional financial accounting in the knowledge-based economy and, secondly, to describe the principal techniques for measuring and managing intangible assets.

1. Financial accounting in the knowledge-based economy

As companies and shareholders begin to note the repercussion intangible assets may have upon business results, the inability of financial statements to reflect these new ways of creating business value has become evident. The fact is that current accounting regulations do not permit inclusion of a large part of the intangible assets acquired or produced by a company.

According to research carried out by Lev (2001), intangible assets might represent between 60 and 75 percent of business assets. Handy (1989) goes further by suggesting that the value of IC is normally three or four times the book value of a company and that efficient and effective management of these assets will become the only way of maintaining a competitive advantage. Given the importance intangibles are acquiring,

traditional financial indicators are no longer sufficient as indicators of the strategic situation or measuring the long-term value and state of a company.

When referring to the use of this information by external users, mention should be made of the study made by Catasús and Gröjer (2001) which assesses decisions made on the granting of credits by financial institutions on the basis of the type of accounting information submitted. The results point to the fact that accounting for intangibles may have considerable importance in the taking of financing-related decisions.

Although an analysis of available literature show that there is general agreement on the strategic importance of intangible assets, it should be noted that there is wide-ranging debate as to which are the most suitable tools for measuring intellectual capital. Bontis (1998) explains that the challenge for academics in the field is to develop theories to be able to treat this highly ambiguous concept more rigorously. As Stewart (1997) states: "Intellectual capital has been considered by many, defined by some, understood by few and valued by practically nobody".

The most intuitive measure of the value of intellectual capital has been identified with the difference between a company's market and net book values (Holland, 2001). It can often be demonstrated that the companies with the greatest differences between these values have high levels of intellectual capital. For example, in June 2000, Microsoft's physical and financial assets represented less than 10% of its market value, and those of Cisco only 5% (Lev, 2001).

Under Spanish accounting rules, this value is only reflected in the annual accounts when there is a for-value transaction which demonstrates this difference via the heading Goodwill (*fondo de comercio*). Spain's General Chart of Accounts (1990) provides the following definition: "All those intangible assets, such as clientele, trading name and similar which imply value for the company". As can be seen, this definition has certain similarities with that offered by Itami (1994): both indicate that these assets must generate economic value for the company.

The main disadvantage of measurements such as goodwill or the difference between market and net book values is that they provide no information on the makeup of the intangible assets. Whilst, for some companies, a large amount of the difference between market and net book values may come from a brand (such as Coca-Cola or Microsoft), for others it may come from know-how or patents, as is the case with the pharmaceutical industry. If we do not know what our intangibles comprise it will be difficult to manage them efficiently.

Furthermore, these measurement approaches are based on two highly questionable assumptions. The first is that the market value of a company is efficient and does not reflect the possible effect of the general market situation or political matters. The second limitation is that it does not take into account the fact that the assets are valued on a historic cost basis, due to applicable accounting regulations, and that this may lead to a lower book value.

In the world of international accounting regulations, progress is slow. The only exception is provided by the US, where some academics have highlighted the fact that traditional financial statements are obsolete for both investors and management. For

example, Lev (2001) points to the fact that measures on the management of intellectual capital provide more relevant information than the profit and loss account or the funds flow statement. The author analyses the link between R&D accounts, the closest precursor to intellectual capital, and business results. According to Lev's research in the USA, companies that invest in R&D obtain profits up to four times greater than companies that make no investment therein.

The FASB (Financial Accounting Standards Board), the USA's leading regulatory body, has published new recommendations affecting intangible assets, with a view to ensuring that their accounting treatment provides a truer reflection of a business's situation. For example, amortisation of goodwill and other intangible assets is no longer compulsory, should these assets not depreciate (FASB, 2001). Software development costs can also be capitalised.

However, running counter to the US trend is IAS 38 of the IASC (1998) (International Accounting Standards Committee), which deems that intangible assets do not meet the definition of assets and cannot therefore be capitalised as such, but must instead be recorded as expenses.

Despite these regulatory limitations, increasing numbers of companies are voluntarily opting to include information on their intangibles in the notes to their annual accounts or as an appendix thereto. Spanish examples of this trend include BBVA and Unión Fenosa. In this sense, Holland (2001) states that market forces make some companies (especially those quoted on capital markets) choose to publish more information than is strictly required.

Apart from the above standards, there is no other type of international or local regulations governing the identification and measurement of an organisation's intangibles. One noteworthy initiative is the Meritum Project (2002), financed by the European Union between 1998 and 2001, which brings together academics and professionals from different countries to create a guide for companies interested in implementing intellectual capital management systems. In light of the project's success, a second has been commenced, dubbed E-know net. It should be noted that these projects have enjoyed the collaboration of companies such as Bankinter, BBVA, Banco Santander Central Hispano and KPMG, amongst others.

Empirical study

Thirteen knowledge-based Spanish listed companies were chosen. Table 1 specifies the companies studied and their businesses. The reasons to choose big listed companies is because they were more likely to publish information on intellectual capital and their market value was known.

Table 1. Companies analysed

Company	Business
1. Amadeus	Provider of software to the travel and tourism industries
2. Bankinter	Banking
3. BBVA	Banking
4. Gamesa	Aeronautics
5. Indra	Provider of information technology
6. NH Hoteles	Hotel management
7. SCH	Banking
8. Telefónica Móviles	Telecommunications
9. Telefónica	Telecommunications
10. Terra Lycos	Telecommunications
11. TPI	Yellow Pages
12. Unión Fenosa	Electrical sector
13. Zeltia	Pharmaceutical

Three different methodologies have been used for this research:

- a) A comparison between book value and market value to assess the amount of “hidden” value not explained by the annual accounts.
- b) A content-analysis of the annual accounts reproducing Guthrie and Petty (2000) and Brennan (2001).
- c) A qualitative analysis of the most representative companies in the sample.

Results

Book value versus market value

The most popular indicator to measure intangible assets at an organizational level is the comparison between the market price and the book value. If the market value is higher than the book value the organization holds intellectual assets not present in the financial statements. If the book value is higher than the market value the company has intellectual liabilities. Although these measure has been severely criticised for its simplicity, it remains useful to illustrate the value of the company which is not reflected in the accounts.

The analysis of the value of intellectual capital using the difference between market and book value shows that there is a general decrease in the “hidden value” of these companies, probably due to the general trend in stock markets. However, except for two cases, the difference between both values remains significant, between a range of 40% and 90% (see Table 2). These results suggest that Spanish listed companies have a high level of unrecognised intangible assets. Only one of the companies, Terra Lycos, presents a market value lower than its book value, which would mean intangible

liabilities. These results are similar to the Irish companies analysed by Brennan (2001) which most companies analysed had a hidden value above 60%.

Table 2. Comparison of market and book values in 13-Spanish listed companies (in millions €)

Company	Book value				Market value				Hidden value			
	1.999	2.000	2.001	2.002	1.999	2.000	2.001	2.002	1.999	2.000	2.001	2.002
Amadeus	651	670	762	792	N/A	3.728	4.614	2.773	N/A	82%	83%	71%
Bankinter	794	810	866	914	3.726	2.913	2.732	1.669	79%	72%	68%	45%
BBVA	8.533	7.568	8.143	7.958	29.881	48.864	41.802	23.202	71%	85%	81%	66%
Gamesa	N/A	200	257	392	1.825	2.180	1.569	1.476	100%	91%	84%	73%
Indra	105	140	219	255	1.379	1.521	1.486	1.152	92%	91%	85%	78%
NH Hoteles	265	523	573	559	916	1.673	1.578	973	71%	69%	64%	43%
SCH	10.364	883	2.847	3.958	41.225	46.390	46.827	25.988	75%	98%	94%	85%
Telefónica Móviles	N/A	5.319	7.489	3.248	N/A	38.408	30.582	25.810	N/A	86%	76%	87%
Telefónica	14.484	5.930	5.862	6.996	80.918	91.624	60.139	41.349	82%	94%	90%	83%
Terra Lycos	1.236	6.126	5.557	3.191	15.190	6.802	5.020	2.275	92%	10%	-11%	-40%
TPI	74	117	139	176	5.915	2.058	1.778	1.164	99%	94%	92%	85%
Unión Fenosa	2.751	2.747	3.112	3.128	5.283	6.261	5.783	3.461	48%	56%	46%	10%
Zeltia	81	316	265	315	570	2.195	2.086	1.088	86%	86%	87%	71%

Content analysis of annual reports

A content analysis of the annual reports of 13 listed companies during a three year period was carried out, adopting the methodology of Guthrie et al. (1999). The analysis included 26 items in the following categories: internal structures, external structures and employee competence. Each variable included several terms, synonyms and words that would fit under the same category. The objective was to carry out a very comprehensive study. For each variable the following data was gathered:

- 1.- Place where it appeared within the annual accounts.
- 2.- Type of data (discursive or numerical).
- 3.- Number of times appearing in the annual accounts.

Replicating previous studies using a similar methodology, only voluntary disclosures were taken into account. Although most of the companies analysed also published their annual accounts in English, we carried out the content analysis in Spanish. The objective was to familiarise with the vocabulary used in order to extend the study to other companies that do not publish their accounts in English.

Most of the variables were found in discursive mode outside of an intellectual capital framework and had no continuity year after year. One interesting variable that has clearly increased over the period is the “Social responsibility” of the company. Within this variable are included words such as “environment”, “social responsibility” and “sponsorship”. In the year 2000 we found a frequency of 56 times, whereas in the year 2002 it was 156.

“Financial relations” and “Customers” appear repeatedly. In the content analysis, those were only counted if they were placed in a context of intangible asset. For example, referring to the importance of customer loyalty or attention to shareholders. Although the numbers shown in Table 3, most of the times it was discursive data without a numerical data to back up the companies’ policy.

To a lesser extent, there has been an increase of published data under the category of employee competence. For example, data related to employees with university degrees or the number of training hours received is more likely to appear as a numerical intangible.

Table 3. Frequency of reporting specific intellectual capital attributes¹

Internal structures	2002	2001	2000
Intellectual property	3	2	1
Patents, trademarks	43	41	47
Copyrights	0	8	7
Management philosophy	3	7	6
Corporate culture	58	33	30
Management processes	133	127	134
Information systems	62	66	45
Networking systems	42	69	56
External structures			
Brands	21	40	36
Customers	172	126	132
Company names	41	26	39
Distribution channels	39	33	49
Business collaborations	72	77	95
Licensing agreements	42	44	29
Favourable contracts	55	45	23
Franchising agreements	2	14	15
Financial relations	105	73	97
Supplier relations	16	10	13
Social responsibility	156	58	56
Employee competence			
Know-how	22	18	15
Education	41	26	28
Vocational qualification	107	69	106
Work-related knowledge	46	39	69
Work-related competencies	58	40	48
Work environment	14	6	12
Total	1,353	1,097	1,188

Some qualitative comments on the companies

The content analysis took into account the words appearing in the complete set of accounts. However, it is interesting to look more carefully at the companies that publish an explicit report on IC. From the thirteen companies analysed, five of them had an “intellectual capital” report named after several headings (see Table 4).

Table 4. Companies publishing an Intellectual Capital Report

Companies publishing an IC report		Companies not publishing an IC report
Company	Terminology used	
Bankinter	“People and Knowledge Management” (2000, 2001). “Intellectual Capital” and “People Management” (2002).	Amadeus Gamesa NH Hoteles TPI Telefónica Telefónica Móviles Terra Zeltia
BBVA	“Intellectual Capital” (2001 and 2002).	
BSCH	“Appendix Intellectual Capital” (2000, 2001). “Our clients” and “Our employees” (2002).	
Indra	“Intellectual capital and knowledge management” (2000, 2001, 2002).	
Unión Fenosa	“Management of intellectual capital” (2000, 2001, 2002).	

Not surprisingly, all the companies that published an IC report were active participants of the Meritum Project (2000), in which a group of european academics working with companies and several institutions wrote a set of guidelines for managing and reporting on intangibles. Of all the 35 companies included in the Spanish index of the Stock Exchange, IBEX-35 only five of them report on their intellectual capital.

The comparison of the IC reports between these five companies is complex. Even within every company the report often varies from year to year.

For example, Bankinter in its published corporate information in 2000 and 2001 included a report entitled “People and Knowledge management” of 10 pages length. In the 2000 the report included quantitative ratios on innovation, flexibility, motivation and participation of staff in company projects. Also the company gave importance to the training received in-company and three quantitative ratios measure it. In the year 2001, the format was similar only a few new ratios of training were introduced.

In the year 2002, the report on intellectual capital was much more sophisticated, distinguisng the three types of intellectual capital: human capital, structural capital and relational capital. Another chapter was entirely devoted to the staff and knowledge management. The number of published ratios has increased every year.

Another example is Union Fenosa, a big company specializing on energy production and distribution, declares as one of its corporate goals “to be a leader in managing the intellectual capital” (Union Fenosa, annual report 2000, p.35). The company attributes a key role in the process of corporate value creation to the IC. Union Fenosa formalised its IC model in 1999 and starting from this year the annual reports incorporate a synthesis of the relevant IC indicators. In the year 2001 Union Fenosa developed specific IC models for its different divisions. The company reports a wide range of the indicators within each of blocks of its IC model, the structural, relational and human capital parts. For this purpose company translate into numbers their core intangible values. For instance, at the first glance purely discursive concept of “shared corporate values”, is proxied with “the number of people given specific training in corporate values” and “the percentage of behaviours aligned with corporate values”. During the analysed period the collection of the indicators reported by Union Fenosa goes through the enrichment and refinement. While in the year 2000 the company reported 46 IC numeric indicators, the respective figures for 2001 and 2002 are 53 and 63. In addition, for each of the analysed years, the company provides qualitative information about the projects and initiatives, developed in order to support and sustain the IC growth.

The financial group BBVA developed the IC metrics within its organizational model of knowledge management with the purpose “to reflect the value of intangibles, which are contributing into the value creation, supplementing the rest of indicators of the financial and tangible assets”(BBVA, annual report 2002, p. 122). The group dedicates around 4 pages in its annual reports for disclosing the IC related information. The BBVA uses traditional three blocks scheme, which includes the structural, relational and human capital. According to the general trend of analysed companies the total amount of numeric indicators reported increased from 43(2000) to 63(2002)². The incorporated in 2002 indicators refer to educational profile of its employees, on-line forms of employees training, usage of computerized technology and software, new product channels and relationships with actionists and society.

Similarly to the BBVA, the banking group BSCH supplements with IC indicators its financial records, giving global vision of the mechanism of the value creation. Each analysed year BSCH reports in total 62 numeric IC indicators. In 2002 the company incorporated the IC information into the chapters dedicated to the company’s clients (structural and relational capital) and employees (human capital). During the analysing period the content of the indicators has been changing. For instance, in 2002 the BSCH added to its human capital indicators the indicators of the employee’s wellbeing, such as total of the training hours on this issue, the number of the projects oriented to conciliation of personal and professional life, and the total investment made for these projects.

Another company reporting on IC is Indra under the heading “intellectual capital and knowledge management”. The IC report of this company merely refers to the four ratios to measure the staff: percentage of university graduates, staff by professional categories, the men-women, growth of staff and average age. The discursive part talks about stock options offered to the staff. This company also gives importance to the research and development costs and publishes the percentage of these costs over total revenues.

² There is no IC data available on the BBVA website for 2001

Conclusions

This research indicates that the general trend is an increase of disclosure of intellectual capital items but mainly in a discursive format, specially for items related to social responsibility of the company.

Only five Spanish listed companies include an IC report with numerical indicators. The reports are identical from year to year, with time they become more comprehensive and adjusted to the strategy of the company during the period.

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