Preparers' and users' perception of intellectual capital information usefulness

A Tunisian exploratory study

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Abstract

Purpose – The purpose of this paper is to explore preparers' and users' perception of intellectual capital (IC) usefulness and to examine the significant differences in the usefulness perceptions of IC information and its categories according to sex, age, function, educational level, specialty and professional experience of respondents.

Design/methodology/approach – This exploratory study drew on a questionnaire survey sent to five groups of preparers and users who were asked to provide their usefulness perception about information on IC and its categories.

Findings – This paper found that the five preparers and users groups perceive information on IC as well as its three categories as useful for their decision-making purposes. In addition, it concluded that the usefulness perception of IC information does not differ by sex, age, function, educational level and specialty of the respondents, but it differs according to the professional experience.

Practical implications – To the extent that users perceive IC information as useful, managers are encouraged to disclose more information about this hidden capital in order to improve their transparency. As there are no generally accepted IC reporting guidelines and in order to fill informational gaps between companies and their stakeholders, accounting standards bodies could regulate the IC information disclosure by developing relevant communication standards in accordance with stakeholders' expectations. They may identify information items that should be considered as a priority by making them mandatory for disclosure purposes, and other items voluntary.

Originality/value – The paper can be regarded as the first exploratory study to investigate the IC information usefulness from the perspectives of five preparers and users groups in Tunisia, as an example of a developing economy in Africa.

Keywords Perception, Tunisia, Usefulness, Intellectual capital, Users, Preparers

Paper type Research paper

1. Introduction

The economic system has changed and become more based on intangible resources. Beyond tangible and visible physical capital, intelligence, skills and knowledge are becoming increasingly exponential (Marr, 2008). It is the advent of the post-industrial era that is increasingly based on the intangible but less and less on physical and financial elements. It is an economy that has no physical foundation but which relies heavily on intellectual capacities to put them at the center of value creation (Holland, 2003).

In Tunisia, a development strategy based on the intangible economy has been pursued since the tenth plan (2002-2006) (Tunisian Institute of Competitiveness and Quantitative Studies (TICQS), 2012). An upgrading program has also been adopted since 1995 in order to support the competitive capacity of Tunisian companies as well as to stimulate industrial partnership, and to strengthen the socio-economic environment of the company. In this respect, the competitiveness survey carried out in February 2010 by the Tunisian Institute of Competitiveness and Quantitative Studies (TICQS), on a sample of adherents and

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non-adherents companies to the upgrading program, showed that this program has indeed favored the appropriation process of knowledge by Tunisian companies. The best performing upgraded companies are those that have pursued a strategy focused on product diversification, R&D, innovation, training, certification and ICT (Tunisian Institute of Competitiveness and Quantitative Studies, 2010). Moreover, in its knowledge economy annual report of 2012, the TICQS stated that Tunisia is making progress, albeit at a moderate pace, toward the knowledge-based economy (TICQS, 2012).

Despite the Tunisia's progress toward knowledge economy and the great efforts to promote and support intangible investments, such as upgrading programs, very few studies have explored the intellectual capital (IC) information perception. No study has examined the perceptions of IC disclosure from a preparers' and users' perspective in Tunisia. Research in this area has particularly focused on the perception of managers (e.g. Boujelbene and Affes, 2013) or that of financial analysts and portfolios managers (e.g. Ferchichi, 2011; Ferchichi and Paturel, 2016).

In order to fill these gaps in the literature, it is interesting, in the light of the intangible investment increase in Tunisia and the lack of academic studies in this field, to explore preparers' and users' perception of the IC information usefulness.

The paper is structured as follows. Section 2 provides the theoretical foundation, definition and typology of IC. Section 3 reviews the prior literature. Section 4 describes the research method. Data collection and respondents' characteristics are presented in Section 5. Section 6 presents and interprets the different results. Section 7 concludes.

2. Theoretical foundation, definition and typology of IC

2.1 Theoretical foundation of IC

The concept of IC originates from the key idea focused on the importance of certain specific resources to the company competitiveness and supported by new theories of strategic management (Carlucci and Schiuma, 2007), such as the resource-based view (Wernerfelt, 1984; Barney, 1986), the core competencies approach (Prahalad and Hamel, 1990) and the dynamic capabilities approach (Teece *et al.*, 1997; Teece, 2000), contributing to the development of a strategic approach of intangible elements (Bounfour, 1998, 2003).

These approaches place intangible resources at the center of the companies' sustainable development by considering them as levers for creating competitive advantages. They have all the specificity of transposing the reflection toward the analysis of the firm, its resources, its knowledge and know-how, its dynamic capacities, its routines as well as its capacity to learn.

Dynamic capabilities enable companies to combine, protect and reconfigure their tangible and intangible assets. They reflect companies' ability to design and implement new types of competitive advantages. This ability is integrated into companies' intentional processes and complements all of their core capabilities.

Among the economic analysis methods that allow understanding, modeling and evaluating IC, is the "Intellectual Capital dynamic Value" approach (Bounfour, 2003). It is based on the work of resource-based view and company's dynamic capabilities. It is an integrated model for assessing performance and the relative value of companies' IC. It falls within a dynamic perspective in that it privileges interactions between different perspectives of IC management and integrates four dimensions for measurement, that are inputs, processes, assets and outputs.

2.2 Definition of IC

According to some authors, like Edvinsson and Malone (1997, 1999), Stewart (1997) and Sveiby (1997), the increase in the market-to-book and Tobin's Q ratios was behind the development of an IC theory. A myriad of multidisciplinary definitions have been given to the IC construct (Marr, 2007). They can be classified according to a three-dimensional

approach: depending on its components (employee skills, culture and organizational image, relationships with stakeholders, technological infrastructure, intellectual property rights, etc.), its role in the company (strategy formulation, behavioral influence and external validation or disclosure), as well as its disciplinary perspective (economic, strategic, financial, accounting and reporting perspective) (Marr and Moustaghfir, 2005).

Drawing on the multitude of definitions given by earlier literature, this IC concept can be defined as "all the company's wealth that does not appear in its financial statements. It combines a set of intangible resources that have no similarity in the physical universe, generating more value for the company, and creating and maintaining a competitive advantage" (Fustec and Marois, 2006; Bouden and Casta, 2013).

2.3 Typology of IC

Various taxonomies of IC exist in the literature (Kaufmann and Schneider, 2004), drawing on the pioneering typology developed both by Edvinsson and Malone (1997) and Sveiby (1997). These taxonomies represent different levels of aggregation and vary notably from two to seven elements. Researchers operationalize IC as a hierarchy of overlapping concepts in which the main IC categories are subdivided into sub-categories or IC items (Beattie and Thomson, 2007).

To generate the list of IC items for this survey, this research was largely inspired by the tripartite framework of Sveiby (1997). This taxonomy includes:

- Human capital (HC): defined as the knowledge that employees take with them when they leave the firm. It comprises the knowledge, skills, experiences and abilities of people (e.g. innovation capacity, creativity, know-how, teamwork capacity, motivation, satisfaction, training, education, etc.).

- Organizational capital (OC): defined as the knowledge that stays within the firm at the end of the working day. It includes organizational routines, procedures, systems, cultures, databases, etc.

- Relational capital (RC): defined as all resources linked to the external relationships of the firm with customers, suppliers, etc. It comprises that part of HC and OC involved with the company's relations with stakeholders (investors, creditors, customers, suppliers, etc.), plus the perceptions that they hold about the company (e.g. customer loyalty, customer satisfaction, links with suppliers, negotiating capacity with financial entities, environmental activities, etc.) (MERITUM, 2002, p. 13).

3. Literature review

Previous studies have examined issues relating to the degree of recognition of the IC concept as well as to different perceptions of the IC information usefulness and IC measurement/disclosure practices in different countries, such as South Africa (April et al., 2003), Austria (Bornemann et al., 1999; Litschka et al., 2006), Canada (Miller et al., 1999), China (An et al., 2014), Egypt (Ahmed and Hussainey, 2010), the USA (Mavrinac and Siesfeld, 1998), France (Béjar, 2006; Cauvin et al., 2006), Hong Kong (Cuganesan et al., 2006), Malaysia (Ousama et al., 2011a, b), the UK (Hall, 1992) and Tunisia (Mezghani et al., 2007; Ferchichi, 2011; Boujelbene and Affes, 2013; Ferchichi and Paturel, 2016). These studies, focusing on the demand for IC information, were conducted from multiple perspectives, such as those of managers, investors, financial analysts and portfolios managers, academics, preparers and users of financial statements and stakeholders.

3.1 Managers' perception of IC

Hall (1992) conducted a questionnaire survey of 847 British CEOs to determine the role of IC in the success of firms. Intangible resources were classified in order of importance. Company

reputation, product reputation, employees' know-how and culture were the most important elements for the firm success.

By undertaking a study on the perception of Austrian managers on the importance of IC information, Bornemann *et al.* (1999) found that there is an increased awareness for such information, even in the absence of clear concepts. Furthermore, they found that 88 percent of respondents perceive IC information as useful and important for decision making.

Through a questionnaire survey conducted among 176 managers belonging to four different Canadian organizations, Miller *et al.* (1999) found that IC information is perceived as useful. HC information is the most useful information in comparison to external capital and internal capital.

Across interviews with senior managers of the 20 largest mining companies, April *et al.* (2003) examined issues relating to the measurement, management and reporting of IC. HC is the most noted by mining companies (over 80 percent) followed by internal capital and external capital. The results exhibited that mining companies highly value the IC, although they lack appropriate systems and structures to effectively manage it.

In exploring the practical approach of IC in Tunisia, Mezghani *et al.* (2007) tried to examine the recognition extent of this concept and to collect the opinions of business leaders as to the means of identification and the accounting rules and disclosure of IC. The results indicated that the recognition degree of this concept is satisfactory. However, this knowledge remains theoretical and does not emanate from a practical and common management framework.

Through a questionnaire survey administered to a sample of 51 Tunisian managers, Boujelbene and Affes (2013) attempted to examine the extent of recognition of the IC concept in the Tunisian context and to identify the perceptions of managers about the accounting treatment and disclosure of this hidden capital. The results showed that the majority of respondents perceive IC items as important factors of value creation. This exploratory study has claimed that managers are aware of the current accounting system deficiencies and approve previous studies that propose voluntary disclosure of IC information as a solution to offset the loss of relevance of traditional accounting information.

3.2 Investors' perception of IC
By exploring investors' perceptions of and needs for non-financial information, Mavrinac and Siesfeld (1998) found that on average 35 percent of non-financial information is used by investors in their decision making. Moreover, they showed that non-financial information is not all considered useful by study participants. According to the respondents to the questionnaire, measures of the strategy implementation, management's credibility, innovation, market share and the company's ability to "attract and retain talented people" are identified, on average, as being considerably more useful than measures of "customer complaints," "programs of quality award," "employee training programs" and "environmental and social policies."

3.3 Financial analysts' and portfolios managers' perception of IC
Through a Delphi survey of French financial analysts and portfolios managers dealing exclusively with the technology sectors, Béjar (2006) defined IC as consisting of six categories: "company management and supervision," "human resources," "innovation," "company organization," "knowledge of activity," "competition and environment" and "client capital." This financial perception from the French financial market has highlighted the importance in the IC definition of the "managerial skills" and the "knowledge that the company develops on its environment."

By carrying out a similar study on the Tunisian financial market, Ferchichi (2011) identified, by consensus and through the Delphi method, investors' information needs

on IC with 22 financial analysts and portfolios managers. These are defined around nine sub-categories: corporate management and management, corporate governance, human resources, organizational structures, innovative capacities, customer capital, external relations and risk management, environmental ethics and capital reputation of the company.

3.4 Preparers' and users' perception of IC

Cuganesan *et al.* (2006) studied the perception of users (members of a professional financial institution) about IC information as disseminated by Hong Kong listed companies. They found that the majority of users (91 percent) perceive this information as useful in their decision making.

By exploring through a questionnaire survey the perceptions of managers and auditors on the IC reporting and measurement by Egyptian companies, Ahmed and Hussainey (2010) found significant differences between respondents' ratings as to IC indicators, due to the variety of industrial sectors composing their sample. In addition, they noted that Egyptian listed firms neither measure nor report IC indicators in their annual reports. Moreover, they found that auditors' responsibilities on IC reporting are ambiguous. Finally, this study concluded that work experience is the main determinant of managers' perceptions of IC indicators, while professional education constitutes the main determinant of external auditors' perceptions of IC indicators.

Ousama *et al.* (2011b) explored both perceptions of preparers and users about the usefulness of IC information disclosed in the annual reports of Malaysian listed companies as well as the significant differences in their usefulness perceptions of the IC information and its three categories. The study found that both preparers and users perceive IC information as useful for decision-making purposes. In addition, it indicated significant differences in the usefulness perception between these two groups.

3.5 Academics' perception of IC

Ousama *et al.* (2011a) examined the perception of academics (a proxy for individual shareholders) as to the usefulness of the IC information disclosed in the annual reports of listed Malaysian companies. The results showed that respondents perceived this information as useful for decision-making purposes. They also indicated that the mean usefulness perception of external capital information is higher in comparison with those of internal capital and human capital.

3.6 Stakeholders' perception of IC

An *et al.* (2014) investigated, in the Chinese context, the perception of a stakeholder panel on the importance of IC attributes. This panel, composed of 20 members from six groups of users of annual reports, represents a wide range of stakeholders, avoiding the bias imposed by a single group of users often found in previous research. The results indicated that all items are noted at least as moderately important, with 60 percent of items are rated as extremely or very important to disclose. These results showed that Chinese stakeholders have strong demands for IC disclosure.

In sum, previous literature on IC perception has generally concluded, via a questionnaire survey or an interview methodology, to the usefulness of IC items. While some studies have highlighted the usefulness supremacy of HC items (e.g. Bornemann *et al.*, 1999 in Austria; Miller *et al.*, 1999 in Canada; April *et al.*, 2003 in South Africa; Boujelbene and Affes, 2013 in Tunisia), other research has emphasized the importance of external capital items (e.g. Ousama *et al.*, 2011a, b in Malaysia). Moreover, most perception studies have been carried out in the context of developed countries. It is only recently that this issue has been raised within the framework of developing and emerging countries (e.g. Egypt, Tunisia or

Malaysia). Furthermore, most studies have focused on the perceptions of managers (Hall, 1992, Bornemann *et al.*, 1999, Miller *et al.*, 1999, Boujelbene and Affes, 2013), investors (Mavrinac and Siesfeld, 1998), financial analysts and portfolios managers (Béjar, 2006; Ferchichi, 2011) and few studies have explored those of stakeholders (An *et al.*, 2014).

This research tries to fill this gap in the literature by studying, in the Tunisian context, the perception of five stakeholders' panels from two different perspectives, those of preparers and users of annual reports.

4. Research method

4.1 Sample selection

The survey aims to collect the preparers' and users' perception of IC information usefulness. Thus, the questionnaire seems to be the most appropriate method of collecting the necessary data. This study is based on the collection of primary data from questionnaires administrated to five preparers and users groups (Table I).

There are various ways of administering a questionnaire: by mail, by telephone, face-to-face or via internet. The choice of data collection method depends on the target population, its location, its structure and cost constraints. This choice is strategic and its good selection conditions the survey results.

Given the diversity of the target population and its geographical dispersion, as well as the questionnaire length, an online questionnaire is adopted. However, this method of administration is accompanied by certain telephone calls, a few visits and some direct contacts. It was started at the end of May 2015 and followed by several bimonthly and monthly reminders until the end of December of the same year.

4.1.1 Preparers group sample. Preparers are the chief accountants and CFOs of 41 non-financial listed companies, as well as chartered accountants and auditors. These respondents are selected as they are responsible for the preparation of annual reports. In addition, they have the knowledge, competence and understanding of such preparation (Ku Nor Izah and Chandler, 2007). Three online questionnaires were sent to each of the 41 non-financial listed companies, either on the general e-mail address of the company and to the attention of the chief accountant and the CFO, or on their specific e-mails.

As for the chartered accountants group, the database available on the Order of Chartered Accountants of Tunisia site is consulted and an online questionnaire is sent on the e-mail of almost 660 of them.

4.1.2 Users group sample. Respondents in the users group are financial analysts/portfolios managers, credit analysts/bankers and academics/accounting researchers.

While financial analysts are investment prescribers, portfolios managers make investment decisions based on analyses and studies made by financial analysts. The online questionnaire is sent on the general e-mail of 26 stock exchange intermediaries as well as on the specific e-mails of their financial analysts and portfolios managers. It was also administered to the credit analysts belonging to ten Tunisian banks.

Group type	Respondents	Population
Preparers	Chief accountants/chief financial officers	41 non-financial listed companies
	Chartered accountants/auditors	Approximately 660 chartered accountants
Users	Financial analysts/portfolios managers	26 stock exchange intermediaries (140 financial analysts and portfolios managers)
	Credit analysts/bankers	10 banks (140 credit analysts and bankers)
	Academics/accounting researchers	10 universities (140 academics/accounting researchers)

Table I.
Preparers and users groups sample

Credit analysts and bankers were mainly selected as respondents as they are in charge of the assessment and approval of listed companies' loan applications and they thus review their annual reports.

The third set of users is academics/accounting researchers. The authors have specifically chosen the accounting researchers, belonging to ten management and accounting universities and mainly those who work on IC subject. Based on their experience and knowledge in the accounting field, they are able to analyze annual reports information. These academics could be proxies for individual shareholders and can thus be considered as users of annual reports (Ousama *et al.*, 2011a). This is a user group, which is often overlooked by previous studies because of the difficulty of determining its population. Although they do not hold too many shares individually, these shareholders collectively represent a considerable percentage of the investor community.

4.2 Questionnaire preparation and content

4.2.1 Questionnaire preparation. A questionnaire survey was conducted to collect the required data. It is a self-constructed questionnaire based on a broad review of IC disclosure literature and inspired by similar type surveys (Béjar, 2006; Cauvin *et al.*, 2006; Ahmed and Hussainey, 2010; Ferchichi, 2011; Ousama *et al.*, 2011a, b; Boujelbene and Affes, 2013).

A review of the IC literature, both in the Tunisian context (e.g. Ferchichi, 2011; Boujelbene and Affes, 2013) and in the international one (e.g. Guthrie and Petty, 2000; Brennan, 2001; Bozzolan *et al.*, 2003; Bukh *et al.*, 2005; Béjar, 2006), has been conducted to identify IC items which are expected to be disclosed in annual reports and are therefore likely to be useful for decision-making purposes.

The research conducted in Australia by Guthrie and Petty (2000) is the exploratory study in this matter. They identify 24 items classified under three categories of IC (i.e. internal capital, external capital and human capital) and derived from the Sveiby framework. While most subsequent studies follow this framework, others make some minor or even major changes.

The first version of the questionnaire includes 70 items (30 HC items, 17 OC items and 23 RC items).

An IC potential framework was, at this stage, mainly built from earlier literature. It covers the most IC important elements and is considered comprehensible and applicable to the study objective. However, since it was essentially constructed especially in developed countries, it is essential to test its validity in the Tunisian context. For this, a consultation was conducted with a panel of five Tunisian subject matter experts composed of an accounting senior lecturer, an accounting doctor, two financial analysts and an administrative and financial director.

The accounting senior lecturer indicated that the grid is generally quite comprehensive. Nevertheless, she made some proposals. First, she suggested, at the HC level, the prediction of the categories related to the items: education, knowledge related to work and innovation. Then, she indicated that the innovation is classified by some authors (e.g. Edvinsson and Malone, 1997; Campbell and Abdul Rahman, 2010) in HC rather than in OC. In fact, Edvinsson and Malone (1997) note that "human capital is the combination of staff knowledge, talent, innovation spirit and capacity." Finally, she proposed to separate the two items "brand image" and "company reputation" at the level of RC and to consider them in two different sub-categories.

The second panelist (an administrative and financial director) suggested adding the item "Group insurance" to the sub-category "Employee health and safety." According to this expert, this item is of great importance for both company and employees. By representing an important business investment, it contributes to the attraction, the motivation and the loyalty of employees.

A financial analyst highlighted the importance of the item "Employee turnover," although she preferred the use of the term "employee retention," which she believes is a better signal in the business evaluation.

In short, these five panelists concluded that the different IC items are relevant, comprehensive and adaptable to the Tunisian context.

The authors also consulted some annual reports of Tunisian listed companies and noticed the existence of all IC items.

Some reclassifications and modifications were thus made to this preliminary list of IC items, which resulted in a series of 76 items (36 HC items, 16 OC items and 24 RC items).

The modified list of IC items is outlined in Table II.

4.2.2 Questionnaire content. The questionnaire is subdivided into three different parts. The first part briefly describes the purpose of the survey and its various intended addressees, as well as a definition of the IC and its categories. The second part is the questionnaire main content and is composed of IC items. Brief descriptions were added to the majority of items to provide more explanations of the terms and to ensure that all respondents had comparable understandings of items. In this section and through closed questions, the objective is to indicate the importance level that respondents give to each of the IC information.

The questions are accompanied by a five-point Likert scale (semantic differentiators) from "Not at all important" to "Extremely important."

The use of a five-point scale is likely to limit the degree of differences both in the respondents' answers and in their interpretation of the level of importance indicated by a given numerical value. Most previous studies using disclosure indexes have rated on a five-point scale, from 0 to 4 (e.g. Schneider and Samkin, 2008), or from 1 to 5 (e.g. Firth, 1979; Cauvin *et al.*, 2006; Ferchichi, 2011; Boujelbene and Affes, 2013). Other studies (e.g. Béjar, 2006) used a seven-point scale. However, given the number of items included in the questionnaire (76 items) and in order to make it easier for the panelists to make a clear decision, a five-point scale was chosen in this study.

In addition to these closed questions, respondents are invited to mention, in the spaces allowed and through open-ended questions, disclosure items that they perceive to be useful but not embodied in the questionnaire and to rate them on a five-point Likert scale from "Not at all important" to "Extremely important."

The third part deals with the respondents' demographic data such as sex, age, function, educational level, specialty and professional experience.

While emphasizing the right of participants to confidentiality and to any questions arising with respect to the study, the questionnaire ultimately provides the option, for any respondent who requests it, to have a copy of the survey summary results.

4.3 Pilot test
Prior to its administration, the questionnaire was subject to a pilot test with a sample of 24 respondents (15 accounting academics/researchers, 3 accountants, 3 professionals, 1 portfolios manager, 1 financial analyst and 1 consultant).

The objective of the pilot study is to ensure that respondents are able to interpret and understand items in the same way, and that these items are relevant.

The survey was also subject to a reliability analysis to test the internal coherence of the measurements based on the Cronbach α coefficient. A Cronbach α coefficient of 0.70 and above indicates that items are highly consistent and therefore reliable. The results of the reliability analysis for all items in the questionnaire show high values of the Cronbach α and above 0.89 (i.e. 0.9629 for IC), as well as for its three categories (0.9435, 0.9132 and 0.8997, respectively, for HC, OC and RC). These results conclude that all items in the questionnaire are reliable.

Human capital	Organizational capital	Relational capital
I. Employees related measures	I. Intellectual property	I. Customers
Employees number	Patents	Number of customers
Professional experience	Trademarks and other	Description of main customers
Average seniority	intellectual property	Breakdown of sales by customer
Average age of employees in the company	II. Corporate	Dependence on major customers
Breakdown of staff by age	governance	Customer satisfaction
Breakdown of staff by seniority	Shareholding	Customer loyalty
Breakdown of staff by gender	structure	II. Suppliers
Breakdown of staff by category	Composition/	Description of major suppliers
(execution, master, executive)	functioning of the	Dependence on major suppliers
Breakdown of staff by department	board of directors	III. Distribution channels and market
(technical, commercial and marketing,	Existence of an	share
financial administration, general	internal audit service	Distribution channels
management, etc.)	Existence of an audit	Market share
Breakdown of staff by appointment type	committee	Breakdown of market share by country/
(permanent, contractual, trainee)	Level of financial	product
Staff turnover	transparency	Marketing
Value added per employee	III. Processes and	IV. Business partnerships
II. Training and development	systems	Business collaborations
Employees education	Management	License agreements
Skills and know-how of senior executives	processes	Franchise contracts
Employees qualification	Internal quality	Favorable contracts
Work-related knowledge of employees	control processes	V. Brand image and corporate
Career development	Information systems	reputation
Employees training programs	Networked systems	Brand image
Training expenditure/duration (days/	Databases	Corporate reputation
hours)	Manual of	Certification of the company's products
Number/categories of employees	administrative and	and services according to an external
benefiting from training	accounting	quality standard
Results/effectiveness of training	procedures	VI. Environmental ethics and
III. Entrepreneurship and innovation	Organizational	community involvement
Entrepreneurial spirit	structure	Investments in the environment's
Employees innovative capacity	IV. Philosophy and	protection and in the conservation of
Development of new products	corporate culture	natural and energy resources
R&D investments	Management	The company's involvement in the
IV. Employees safety and health	philosophy	community
Employees safety	Corporate culture	V. External relationships
Employees health		Financial relationships
Insurance group (health insurance,		Relationships with competition
disability, death)		Relationships with other stakeholders
V. Employees well-being and satisfaction		
Employees compensation policies		
Employees motivation		
Employees incentives		
Employees satisfaction		
VI. Employees relationships		
Employees flexibility		
Employees recruitment policies		
Relationships with trade union		
Employees social participation		

Table II.
List of IC items

A content validity test was also conducted to ensure that measures include sufficient coverage of the examined items. Thus, a panel of accounting researchers examined the questionnaire and concluded that it is both comprehensible and intelligible, with sufficient coverage and clear content and well adapted to the Tunisian companies context.

5. Data collection and respondents' characteristics

5.1 Data collection

A total of 180 respondents' answers were returned complete and valid. The distribution of the questionnaires received by each respondents group is presented in Table III.

The overall response rate for this study is 15 percent. Apart from the response rate of the chartered accountants/auditors group which is about 6.67 percent, the other response rates are above 20 percent.

Although it is lower than the response rates observed in some previous studies (20.65 percent in the Cauvin *et al.*, 2006 study; 29 percent in the Ousama *et al.*, 2011a study; and 27 percent in the study of Ousama *et al.*, 2011b), the response rate of this study can be considered acceptable since it is equal to 15 percent, which is the response rate of the most of the survey studies conducted in the Tunisian context.

5.2 Non-response bias test and reliability test

5.2.1 Non-response bias test. A non-response bias test is carried out using the Student test between the first and last respondents (the assumptions of normality and equality of variances between the two groups are verified). The presumption of the non-response bias test is based on the assumption that respondents who respond less easily and late are assimilated to non-respondents and are thus proxies for non-respondents (Oppenheim, 2001).

The Student test results indicate that there are no significant differences between the first and last respondents for IC as well as for its three categories and there is therefore no non-response bias. On the other hand, the internal validity constraint is still present. It is always possible that the interviewees do not really express what they think (Béjar, 2006).

5.2.2 Reliability test. Beyond the non-response bias test, the questionnaires were also tested for reliability. Peter (1979) determines thresholds that depend on the type of performed research. For an exploratory research, a coefficient of 0.50 or 0.60 is considered as an acceptable value. However, in basic research, a coefficient of 0.80 is the minimum threshold. The Cronbach α values for IC and for its three categories are, respectively, equal to 0.9514, 0.9409, 0.8718 and 0.9037. These results confirm those of the pilot test by indicating that measurements are reliable.

5.3 Characteristics of the sample respondents

Tables IV-IX show the breakdown of respondents by sex, age, function, educational level, specialty and professional experience.

Respondents	Distributed questionnaires	Received questionnaires	Response rate (%)
Chief accountants/CFOs	120	30	25
Chartered accountants/auditors	660	44	6.67
Financial analysts/portfolios managers	140	31	22.14
Credit analysts/bankers	140	30	21.43
Academics/accounting researchers	140	45	32.14
Total	1,200	180	15

Table III.
Distributed and received questionnaires

Sex	Number	%
Male	124	68.89
Female	56	31.11
Total	180	100

Table IV.
Breakdown of respondents by sex

A total of 68.89 percent of the respondents are male and 31.11 percent are female (Table IV).

A total of 60 percent of respondents are between the age of 30 and 40 years old, followed by 20 percent between 40 and 50 years old and 9.44 percent above 50 years old. However, only 10.56 percent are under 30 years old (Table V).

Age	Number	%
Less than 30 years	19	10.56
From 30 to 40 years	108	60
From 40 to 50 years	36	20
Over 50 years	17	9.44
Total	180	100

Table V.
Breakdown of
respondents by age

Function	Number	%
Chief accountant/CFO	30	16.67
Chartered accountant/auditor	44	24.44
Financial analyst/portfolios manager	31	17.22
Credit analyst/banker	30	16.67
Academic/accounting researcher	45	25
Total	180	100

Table VI.
Breakdown of
respondents by
function

Educational level	Number	%
Senior technician	3	1.67
Bachelor degree	26	14.44
Master degree	45	25
Degree in chartered accountancy	56	31.11
Doctorate	29	16.11
Post-doctorate	21	11.67
Total	180	100

Table VII.
Breakdown of
respondents by
educational level

Specialty	Number	%
Accounting	99	55
Finance	67	37.22
Management	14	7.78
Total	180	100

Table VIII.
Breakdown of
respondents by
specialty

Experience	Number	%
Less than 5 years	26	14.44
Between 5 and 10 years	60	33.33
Over 10 years	94	52.22
Total	180	100

Table IX.
Breakdown of
respondents by
professional
experience

About 41.11 percent of respondents belong to the preparers group, while 58.89 percent of the interviewed are part of the users group (Table VI).

A total of 31.11 percent of the panelists are chartered accountants, 25 percent hold a master degree, 16.11 percent a doctorate, 14.44 percent a bachelor degree and 11.67 percent a post-doctorate, while only 1.67 percent of respondents are senior technicians (Table VII).

A total of 55 percent of respondents are specialized in accounting, 37.22 percent in finance, while only 7.78 percent are specialized in management (Table VIII).

A total of 52.22 percent of respondents have professional experience over ten years, followed by 33.33 percent with experience between five and ten years, while only 14.44 percent of panelists have less than five years' experience (Table IX).

Given the respondents' professional experience as well as their specialty and educational level, they seem appropriately qualified to provide their views on the perception of IC information usefulness.

6. Presentation and interpretation of results
6.1 The univariate analysis
6.1.1 Descriptive statistical analysis. A descriptive statistical analysis of the usefulness perception of IC information was first conducted (Table X).

Table X shows that the average usefulness of IC information is 3.614, indicating that both preparers and users generally perceive this information, which is likely to be disclosed in the annual reports of Tunisian listed companies, as useful for their decision making. This result is consistent with previous studies (Mavrinac and Siesfeld, 1998; Bornemann *et al.*, 1999; Miller *et al.*, 1999; April *et al.*, 2003; Cuganesan *et al.*, 2006; Ousama *et al.*, 2011a, b; Boujelbene and Affes, 2013; An *et al.*, 2014; Ferchichi and Paturel, 2016).

The results show, from the same table, that information relating to OC is perceived in Tunisia as the most useful relatively to information on RC as well as on HC.

These results contradict both those found by Bornemann *et al.* (1999) in Austria, by Miller *et al.* (1999) in Canada, by April *et al.* (2003) in South Africa and by Boujelbene and Affes (2013) in Tunisia who found that HC information is the most useful, as well as those found by Ousama *et al.* (2011a, b) in Malaysia which concluded that external capital information is perceived to be the most useful comparatively to the other two categories of IC.

Several reasons may justify such results. First of all, the divergence of the usefulness perception of IC information between previous studies and this survey may be due to the different information needs of various users groups, as the present study was interested in five groups in comparison with other studies, which often focused on a single user group.

Moreover, this results divergence could be due to the use of different measurement instruments (IC items) in each study. Furthermore, the five groups of preparers and users in this study may not consider information on HC or those dealing with the relationships between company and its stakeholders as useful, but rather OC information (e.g. information systems, databases, organizational structure, corporate governance, management philosophy and corporate culture, etc.) that is most useful. Indeed, these

			Variables	
Statistics	IC	HC	OC	RC
Mean	3.614	3.396	3.890	3.759
Median	3.566	3.444	3.875	3.792
SD	0.443	0.556	0.533	0.526
Minimum	2.605	1.556	2.437	2.542
Maximum	4.829	4.722	5	4.958

Table X.
Descriptive statistics results of the usefulness perception of IC and its three categories for all respondents

interviewees are more familiar with such category and their awareness extent on it is very developed in comparison to HC and RC.

The preparers' group interviewees seem to have great internal foci and rely more heavily on their internal resources (that is the OC items) rather than on human elements or external networks.

The users' group respondents sound to have strong demands for OC information. Their informational needs on these elements are very substantial and tremendous relatively to other categories.

This can be essentially explained by two facts. The first is the promulgation of the law No. 2005-96 of October 18, 2005, relative to the strengthening of the security of financial relationships which calls for an increase both in the communication strategy of financial information and also in the disclosure on good corporate governance practices in order to improve companies' transparency. The second lies in the publication, by the Arab Institute of Business Leaders with the collaboration of the Center for International Private Enterprise, of a code of best practice of corporate governance in June 2008 that presents the major recommendations relating to the companies' management and control and aims at making the Tunisian system of corporate governance more transparent and intelligible so as to promote the confidence not only of national and international investors but also that of customers, employees and the community in the Tunisian companies' management and control (Code of Best Practice of Corporate Governance, 2008).

This result can also be attributed to the low level of awareness both of the groups of preparers and users as to the importance of HC information and to the lack of appropriate guidelines for practical measuring and disclosing such information. HC does not belong to the companies as it is difficult to control and manage and which can benefit competitors wishing to attract qualified, competent and experienced employees.

Finally, the study context (country of origin) may affect the usefulness perception of IC information. Indeed, IC disclosure practices appear to be more advanced in developed countries than in developing countries, and therefore the understanding degree of IC concept is more important in the case of developed countries.

Table X also presents the standard deviations of IC as well as HC, OC and RC which are, respectively, 0.443, 0.556, 0.533 and 0.526. They are considered low relative to the means, indicating a small disparity between respondents' perceptions of the IC information usefulness. As a result, both preparers and users of annual reports generally agree on the usefulness of this information. It is thus possible to satisfy them simultaneously.

The descriptive statistical analysis results for each group, as presented in Table XI, show that the IC mean usefulness perceived by the preparers group is slightly higher than that perceived by the users group. In addition, it is the group of chief accountants/CFOs that perceives IC as the most useful, followed by the group of credit analysts/bankers, then the group of academics/accounting researchers, chartered accountants/auditors and financial analysts/portfolios managers. Moreover, all respondents groups, except the financial analysts/portfolios managers group, perceive OC as the most useful, followed by RC and HC. Finally, the financial analysts/portfolios managers group perceives RC as the most useful and HC as the least useful.

Beyond the descriptive statistical analysis of the information usefulness perception of IC and its three categories, the respondents' average perception (the weighting of the IC items and the sub-categories) has been determined and a ranking of the averages of both IC items and sub-categories has been also carried out to determine those that are perceived as the most useful and those that are perceived as the least useful by the different respondents (not tabulated for brevity).

The results showed that the five sub-categories that are perceived to be the most useful are: "Corporate governance," "Brand image and corporate reputation," "Intellectual property,"

	Variables			
Respondents group	IC	HC	OC	RC
Preparers group				
Preparers				
n	74	74	74	74
Mean	3.622	3.4188	3.909	3.735
SD	0.456	0.498	0.532	0.558
Chief accountants/CFOs				
n	30	30	30	30
Mean	3.686	3.443	3.998	3.843
SD	0.481	0.541	0.518	0.519
Chartered accountants/auditors				
n	44	44	44	44
Mean	3.577	3.401	3.848	3.662
SD	0.438	0.473	0.539	0.578
Users group				
Users				
n	106	106	106	106
Mean	3.609	3.380	3.877	3.775
SD	0.435	0.594	0.535	0.505
Financial analysts/portfolios managers				
n	31	31	31	31
Mean	3.536	3.236	3.750	3.844
SD	0.388	0.597	0.421	0.408
Credit analysts/bankers				
n	30	30	30	30
Mean	3.649	3.398	3.954	3,824
SD	0.507	0.717	0.596	0.564
Academics/accounting researchers				
n	45	45	45	45
Mean	3.633	3.468	3.912	3.694
SD	0.417	0.488	0.559	0.523

Table XI.
Descriptive statistics results of the usefulness perception of IC and its three categories for each respondents group

"Distribution channels and market share" and "Processes and systems." However, the five sub-categories that are perceived to be the least useful are: "Employees relationships," "Employees related measures," "Environmental ethics and community involvement," "Training and development" and "Suppliers." Although the average of the most useful sub-category is 4.157, the mean of the least useful sub-category is 2.971.

Moreover, the five items that are perceived as the most useful by respondents are: "Level of financial transparency, "Market share," "Existence of an internal audit service," "Certification of the company's products and services according to an external quality standard" and "Corporate reputation," whereas the five items that are perceived to be the least useful are: "Breakdown of staff by gender," "Employees social participation," "Breakdown of staff by age," "Breakdown of staff by seniority" and "Relationships with trade union." Although the average of the most useful item is 4.444, the average of the least useful item is 2.133. It should be noted that an information item considered useful may not be used in practice.

6.1.2 Significance test of the usefulness perception of IC and its three categories. A more thorough analysis is carried out to examine the significance of the different respondents' usefulness perception of information on both IC and its three categories. In order to perform one-sample Student test, two hypotheses must be fulfilled: random sampling and normality of the data.

The one-sample Student test hypotheses are checked for the variables IC, OC and RC, whereas for the variable HC, it is necessary to resort to a nonparametric test. It is the one-sample Wilcoxon test.

Table XII presents the one-sample Student test results of panelists' usefulness perception of information on IC, OC and RC. It is about testing whether the mean of a single variable differs from a specified value which is equal in this study to 3 (neutral value) as the questionnaire used a five-point Likert scale.

Table XIII presents the one-sample Wilcoxon test results of panelists' perception of HC information usefulness. It is about testing whether the median of this variable differs from a specified value that equals to 3.

The results of one-sample Student and one-sample Wilcoxon tests indicate that information on IC and its three categories is perceived as useful by all respondents at the 1 percent level. This result confirms those of descriptive statistics which revealed that average scores of IC, OC and RC were above 3.5.

Another one-sample Student test of the usefulness perception of IC and its categories was also carried out for each group of respondents. The results show that each group perceives information on IC and its categories as useful at the 5 and 1 percent levels.

6.2 The bivariate analysis

6.2.1 Tests of differences in the usefulness perception between categories of IC. An even more thorough analysis is performed to test whether there are significant differences in the usefulness perception between different categories of IC.

In order to carry out the paired-samples Student test, it is necessary to check both the normality and the variances equality of the variables in question. The normality is verified for the variables IC, OC and RC. The three tests of variances equality results do not allow rejection of the null hypothesis of variances equality in the different groups.

The conditions of paired-samples Student test validity, i.e. the normality and the variances homogeneity are thus fulfilled with respect to the variables IC, OC and RC. Given the non-normality of the variable HC, a nonparametric test is considered. It is the paired-samples Wilcoxon test.

The results of paired-samples Student and Wilcoxon tests between different IC categories are summarized in Tables XIV and XV.

The results show that there are significant differences between respondents' perceptions of the usefulness of OC and RC, HC and OC and HC and RC at the 1 percent level.

Variable	df	Mean	t-Statistic	Significance of t
IC	179	3.614	18.625	0.0000***
OC	179	3.890	22.404	0.0000***
RC	179	3.759	19.331	0.0000***
Notes: H_0: mean = 3. ***Significant at the 1 percent level				

Table XII.
One-sample Student test results of the usefulness perception of IC, OC and RC

Variable	Observations	Ranks sum	z-Statistic	Significance of t
HC	180	16,290	8,083	0,0000***
Notes: H_0: median = 3. ***Significant at the 1 percent level				

Table XIII.
One-sample Wilcoxon test results of the usefulness perception of HC

The results thus conclude that the various respondents to the questionnaire perceive differently the information usefulness on the three IC categories.

These findings are similar to those obtained by Ahmed and Hussainey (2010), in the Egyptian context, who found, through a questionnaire survey, significant differences between respondents' ratings as to IC indicators, due to the variety of industrial sectors composing their sample. The results are also analogous to those of Ousama *et al.* (2011a) who showed, in the Malaysian context, that there are significant differences between the respondents' perception on the usefulness of internal capital (OC) and external capital (RC) on the one hand, and external capital (RC) and human capital (HC) on the other hand.

6.2.2 Correlation analyses. Correlation analyses were also made between the usefulness mean perceptions of the different IC categories. Given the normality of the variables IC, OC and RC and the non-normality of the variable HC, both the Pearson parametric correlation matrix and the Spearman nonparametric correlation matrix are used (Table XVI).

The results of the two correlation matrixes are similar and show that all mean perceptions of usefulness are significantly correlated at the 1 percent level for both IC and its three categories. This result is not surprising as these variables are all components of IC and are interdependent with each other. For example, good information systems and networks, relevant and effective management processes within a company (OC) will help to build strong relationships with external partners, suppliers and customers (RC). In addition, competent, experienced and satisfied staff is able to establish a relevant management

Table XIV.
Paired-samples Student test results of usefulness perception between OC and RC

		Differences			
Groups	df	Mean	SD	*t*-Statistic	Significance
OC and RC	179	−0.131	0.466	−3.779	0.0002***

Notes: H_0: mean HC = mean OC; mean HC = mean CR; mean RC = mean OC. H_0 is rejected ($p < \alpha = 0.05$). ***Significant at the 1 percent level

Table XV.
Paired-sample Wilcoxon test results of usefulness perception between HC and OC and between HC and RC

Groups	Observations	Ranks sum	*z*-Statistic	Significance of *t*
HC and OC	180	16,290	−9.465	0.0000***
HC and RC	180	16,290	−7.521	0.0000***

Notes: H_0: rank HC = rank OC; rank HC = rank RC; rank RC = rank OC. H_0 is rejected ($p < \alpha = 0.05$). ***Significant at the 1 percent level

Table XVI.
Pearson and Spearman correlation analyses of usefulness perception of IC and its categories

	IC	HC	OC	RC
IC	1.0000	0.8702*** (0.0000)	0.7768*** (0.0000)	0.7516*** (0.0000)
HC	0.8675*** (0.0000)	1.0000	0.5302*** (0.0000)	0.4235*** (0.0000)
OC	0.7807*** (0.0000)	0.4998*** (0.0000)	1.0000	0.6124*** (0.0000)
RC	0.7624*** (0.0000)	0.3894*** (0.0000)	0.6125*** (0.0000)	1.0000

Notes: The significance thresholds are in parentheses. The Spearman correlation coefficients are above the diagonal, while the Pearson correlation coefficients are below the diagonal. ***Correlation significant at the 1 percent level

philosophy and an effective corporate culture, conceive a good governance system and promote the company's reputation and image brand. According to Fustec and Marois (2006, p. 23), without the qualities and skills of HC, there could be no good customers, no good brands, no good patents and no good information and organizational systems. However, the three IC components are more correlated with IC than each one to the other. This result corroborates those of paired-samples Student tests attesting the existence of significant differences between the three IC categories.

The correlation between the usefulness of the different IC categories finds its theoretical explanation in the IC tripartite framework (Edvinsson and Malone, 1997; Sveiby, 1997). Indeed, this IC typology includes: HC that is the knowledge that employees take with them when they leave the firm, OC that is the knowledge that stays within the firm at the end of the working day and RC that is constituted by all resources linked to the external relationships of the firm with customers, suppliers and comprises that part of HC and OC involved with the company's relations with stakeholders plus the perceptions that they hold about the company (MERITUM, 2002, p. 13).

6.2.3 Tests of differences in the perception of IC usefulness between preparers and users and by sex. 6.2.3.1 Tests of differences in the perception of IC usefulness between preparers and users. To examine the differences in the usefulness perception of IC information (and each of its three categories) between preparers and users, an independent-samples Student test is used for the variables IC, OC and RC (for which normality and variances equality are verified), as well as an independent-samples Mann-Whitney test is performed for the variable HC (Tables XVII and XVIII).

The results of the independent-samples Student and Mann-Whitney tests between preparers and users show that t and z values are not statistically significant for the variables IC, HC, OC and RC. These results show that the perception of the preparers as to the usefulness of information on IC and its categories is not significantly different from that of users. These results suggest that users' information needs on IC are globally the same of the preparers' expectations on IC. These findings are different to those obtained by Ousama *et al.* (2011b). While they found that both preparers and users perceive IC information as useful for decision-making purposes, they indicated significant differences in the usefulness perception between these two groups.

Variable	Group	Observations	Mean	Mean difference	t-Statistic	Significance
IC	G_0	106	3.609	−0.012	−0.180	0.8569
	G_1	74	3.622			
OC	G_0	106	3.877	−0.032	−0.396	0.6929
	G_1	74	3.909			
RC	G_0	106	3.775	0.039	0.493	0.6226
	G_1	74	3.735			

Notes: H_0: mean G_0 (users group) = mean G_1 (preparers group). We cannot reject H_0 ($p > 0.05$)

Table XVII.
Independent-samples Student test results of the usefulness perception of IC, OC and RC between preparers and users

Variable	Group	Observations	Ranks sum	z-Statistic	Significance
HC	G_0	106	9,711	0.343	0.7315
	G_1	74	6,579		

Notes: H_0: rank G_0 (users group) = rank G_1 (preparers group). We cannot reject H_0 ($p > 0.05$)

Table XVIII.
Independent-samples Mann-Whitney test results of the usefulness perception of HC between preparers and users

Although there are few theories supporting the usefulness of IC information, stakeholder theory can be considered to elucidate the perceived usefulness of such information. This theory suggests that all stakeholders have the right to get information on the company's activities, notably that on IC. The supplied information should reflect the discharge of the company's obligations to stakeholders and therefore these latter should perceive them useful.

6.2.3.2 Tests of differences in the perception of IC usefulness by sex. In order to test the differences in the usefulness perception of IC information (and each of its three categories) according to the respondents sex, an independent-samples Student test is used for the variables IC, OC and RC as well as an independent-samples Mann-Whitney test is performed for the variable HC (the normality condition is not satisfied for this variable although the variances homogeneity condition is fulfilled) (Tables XIX and XX).

The results of the independent-samples Student and Mann-Whitney tests of the usefulness perception of IC and its categories according to the respondents sex show that t and z values are not statistically significant both for IC and its three categories, although the usefulness means perceptions of IC, OC, (HC) and RC of male respondents are slightly higher (slightly lower) than those of female respondents. These results show that the respondents' sex does not affect the usefulness perception of information on IC and its categories.

6.2.4 Tests of differences in the perception of IC usefulness according to the age, function, educational level, specialty and professional experience of respondents. In order to test the existence of significant differences in the usefulness perception of IC information (and each of its three categories) according to the age, function, educational level, specialty and professional experience of respondents, a one-way ANOVA and a Kruskal-Wallis test are used. Although the analysis of one-factor variance requires certain assumptions, namely, normality, independence and homogeneity of variances, the Kruskal-Wallis nonparametric test does not require any condition for its application.

6.2.4.1 Tests of differences in the perception of IC usefulness by respondents' age. Table XXI presents the one-way ANOVA results of the usefulness perception of IC and its categories according to the respondents' age.

The results show that there are no significant differences (at the 5 percent level) in the usefulness perception of IC and its categories according to the respondents' age. However, there is a statistically significant difference at the 10 percent level in the usefulness

Variable	Group	Observations	Mean	Mean difference	t-Statistic	Significance
IC	G_0	56	3.613	−0.001	−0.020	0.9840
	G_1	124	3.615			
OC	G_0	56	3.872	−0.026	−0.308	0.7581
	G_1	124	3.898			
RC	G_0	56	3.745	−0.020	−0.235	0.8143
	G_1	124	3.765			

Notes: H_0: mean G_0 (female group) = mean G_1 (male group). We cannot reject H_0 ($p > 0.05$)

Table XIX.
Independent-samples Student test results of the usefulness perception of IC, OC and RC by sex

Variable	Group	Observations	Ranks sum	z-Statistic	Significance
HC	G_0	56	5,217.5	0.462	0.6440
	G_1	124	11,072.5		

Notes: H_0: rank G_0 (female group) = rank G_1 (male group). We cannot reject H_0 ($p > 0.05$)

Table XX.
Independent-samples Mann-Whitney test results of the usefulness perception of HC by sex

Variable	Sum of squares	df	Mean square	F-statistic	Significance
IC					
Between groups	0.711	3	0.237	1.21	0.3059
Within groups	34.359	176	0.195		
Total	35.070	179	0.196		
HC					
Between groups	1.937	3	0.646	2.13	0.0979*
Within groups	53.313	176	0.303		
Total	55.250	179	0.309		
OC					
Between groups	0.250	3	0.083	0.29	0.8328
Within groups	50.589	176	0.287		
Total	50.839	179	0.284		
RC					
Between groups	0.578	3	0.193	0.69	0.5583
Within groups	49.035	176	0.279		
Total	49.613	179	0.277		

Notes: H_0: mean $G_1 =$ mean $G_2 =$ mean $G_3 =$ mean G_4. G_1: respondents aged less than 30 years. G_2: respondents aged between 30 and 40 years. G_3: respondents aged from 41 to 50 years. G_4: respondents aged over 51 years. *Significant at the 10 percent level

Table XXI.
One-way ANOVA results of the usefulness perception of IC and its categories by respondents' age

perception of HC by age. Indeed, the older respondents perceive HC as more useful than the younger respondents.

6.2.4.2 Tests of differences in the perception of IC usefulness by respondents' function. Table XXII presents the one-way ANOVA results of the usefulness perception of IC and its categories according to the respondents' function.

Variable	Sum of squares	df	Mean square	F-statistic	Significance
IC					
Between groups	0.456	4	0.114	0.58	0.6797
Within groups	34.614	175	0.198		
Total	35.070	179	0.196		
HC					
Between groups	1.090	4	0.272	0.88	0.4770
Within groups	54.161	175	0.309		
Total	55.250	179	0.309		
OC					
Between groups	1.181	4	0.295	1.04	0.3879
Within groups	49.658	175	0.284		
Total	50.839	179	0.284		
RC					
Between groups	1.164	4	0.291	1.05	0.3826
Within groups	48.450	175	0.277		
Total	49.613	179	0.277		

Notes: H_0: mean $G_1 =$ mean $G_2 =$ mean $G_3 =$ mean $G_4 =$ mean G_5. G_1: chief accountants/CFOs. G_2: chartered accountants/auditors. G_3: financial analysts/portfolios managers. G_4: credit analysts/bankers. G_5: academics/accounting researchers

Table XXII.
One-way ANOVA results of the usefulness perception of IC and its categories by respondents' function

The results show that there are no significant differences at the 5 percent level of the usefulness perception of IC and its categories according to the respondents' function.

6.2.4.3 Tests of differences in the perception of IC usefulness by respondents' educational level. Tables XXIII and XXIV present the results of the one-way ANOVA and Kruskal-Wallis test of the usefulness perception of IC and its categories according to the respondents' educational level.

The results of the one-way ANOVA and Kruskal-Wallis test show that there are no significant differences in the usefulness perception of IC and its categories according to the respondents' educational level.

6.2.4.4 Tests of differences in the perception of IC usefulness by respondents' specialty. Tables XXV and XXVI present the results of the one-way ANOVA (for the variables that satisfied the assumptions of normality and equality of variances) and Kruskal-Wallis test (for the variable that did not verify ANOVA's assumptions) of the usefulness perception of IC and its categories according to the respondents' specialty.

The results show that there are no significant differences (at the 5 percent level) in the usefulness perception of IC, HC and OC depending on the specialty of respondents, while there is a significant difference at the 1 percent level of the usefulness perception of RC. Indeed, it is the financiers who perceive RC the most useful compared to accountants and managers.

6.2.4.5 Tests of differences in the perception of IC usefulness by respondents' professional experience. Tables XXVII and XXVIII present the results of the one-way ANOVA and Kruskal-Wallis test of the usefulness perception of IC and its categories according to the respondents' professional experience.

Variable	Sum of squares	df	Mean square	F-statistic	Significance
IC					
Between groups	0.352	5	0.0704	0.35	0.8798
Within groups	34.718	174	0.199		
Total	35.070	179	0.196		
OC					
Between groups	0.263	5	0.052	0.18	0.9695
Within groups	50.576	174	0.291		
Total	50.839	179	0.284		
RC					
Between groups	0.592	5	0.118	0.42	0.8339
Within groups	49.021	174	0.282		
Total	49.613	179	0.277		

Notes: H_0: mean G_1 = mean G_2 = mean G_3 = mean G_4 = mean G_5 = mean G_6. G_1: senior technician. G_2: bachelor degree. G_3: master degree. G_4: degree in chartered accountancy. G_5: doctorate. G_6: post-doctorate

Table XXIII.
One-way ANOVA results of the usefulness perception of IC and its categories by respondents' educational level

Variable	χ^2	Significance
HC	4.588	0.4682

Notes: H_0: mean rank G_1 = mean rank G_2 = mean rank G_3 = mean rank G_4 = mean rank G_5 = mean rank G_6. G_1: senior technician. G_2: bachelor degree. G_3: master degree. G_4: degree in chartered accountancy. G_5: doctorate. G_6: post-doctorate

Table XXIV.
Kruskal-Wallis test result of the HC usefulness perception by respondents' educational level

Variable	Sum of squares	df	Mean square	F-statistic	Significance
IC					
Between groups	0.324	2	0.162	0.83	0.4395
Within groups	34.746	177	0.196		
Total	35.070	179	0.196		
OC					
Between groups	0.318	2	0.159	0.56	0.5738
Within groups	50.521	177	0.285		
Total	50.839	179	0.284		
RC					
Between groups	2.718	2	1.359	5.13	0.0068***
Within groups	46.895	177	0.264		
Total	49.613	179	0.277		

Notes: H_0: mean G_1 = mean G_2 = mean G_3. G_1: accounting specialty. G_2: finance specialty. G_3: management specialty. ***Significant at the 1 percent level

Table XXV.
One-way ANOVA
results of the
usefulness perception
of IC and its
categories by
respondents' specialty

Variable	χ^2	Significance
HC	0.815	0.6654

Notes: H_0: mean rank G_1 = mean rank G_2 = mean rank G_3. G_1: accounting specialty. G_2: finance specialty. G_3: management specialty

Table XXVI.
Kruskal-Wallis test
result of the human
capital usefulness
perception by
respondents' specialty

Variable	Sum of squares	df	Mean square	F-statistic	Significance
IC					
Between groups	1.281	2	0.640	3.35	0.0372**
Within groups	33.790	177	0.191		
Total	35.070	179	0.196		
HC					
Between groups	3.069	2	1.535	5.21	0.0064***
Within groups	52.181	177	0.295		
Total	55.250	179	0.309		
RC					
Between groups	0.558	2	0.279	1.01	0.3675
Within groups	49.055	177	0.277		
Total	49.613	179	0.277		

Notes: H_0: mean G_1 = mean G_2 = mean G_3. G_1: professional experience less than 5 years. G_2: professional experience between 5 and 10 years. G_3: professional experience more than 10 years. **,***Significant at the 5 and 1 percent levels, respectively

Table XXVII.
One-way ANOVA
results of the
usefulness perception
of IC and its
categories by
respondents'
professional
experience

The results show that there are no significant differences in the usefulness perception of the OC and RC according to the respondents' professional experience. However, there is a significant difference in the usefulness perception of IC at the 5 percent level and HC at the 1 percent level depending on professional experience. Indeed, respondents with professional

experience beyond ten years perceive IC and HC more useful than the other respondents. As a result, the concepts of IC and HC are gaining increasing importance as professional experience is acquired.

In sum, these results indicate that sex, function and educational level of respondents do not affect their usefulness perception of IC as well as its three categories. However, the interviewees' age and professional experience influence the usefulness perception of HC. Indeed, respondents aged over 51 years old and with professional experience beyond ten years perceive HC information more useful than the other respondents. Finally, respondents who are specialists in finance perceive RC more useful than the other respondents.

This finding is very beneficial for companies as they do not need to supply different information to individuals who are of different sex, age, function, educational level and specialty, while professional experience is a determinant of the usefulness perception of IC.

Although these results are almost similar to those found by Ousama *et al.* (2011a) who concluded in the Malaysian context that the respondents' perception on IC usefulness and its components does not change based on gender, age and working experience, they are different to those obtained by Ahmed and Hussainey (2010) in the Egyptian context who found that work experience is the main determinant of managers' perceptions of IC indicators, and professional education is the main determinant of external auditors' perceptions of IC indicators.

6.3 Respondents' feedback
With respect to the questionnaire's open-ended questions, some respondents added items in the spaces allowed that they considered relevant, whether at the level of HC, OC or RC (not tabulated for brevity). Most of these items refer to items already existing in the questionnaire, but which are mentioned in a different way or with new designations in the respondents' own words. This finding reflects thereby a certain consensus among different interviewees as to their IC information needs.

In addition, some comments are received from interviewees as to IC information. An experienced chartered accountant (aged between 41 and 50 years old and with professional experience beyond ten years), among the respondents, suggested that "there should be standards for the organizational capital disclosure to avoid sterile literature in management reports." He added that "some IC information of an enterprise could have adverse consequences on its competitive abilities. Keeping it secret could help strengthen this IC." He pointed to "the need for regulators to introduce accounting standards that guide companies in their disclosure process on IC and specifically on organizational capital. On the other hand, transparency in the area of intangible can, in some cases, undermine the companies' competitive advantage."

In the same vein, a chief accountant noted "the fact that several information is considered by the company as confidential and this latter is not going to be able to disclose. It's like it gives the competition its weapon with which it will beat it. Certain information is sensitive and employees will be required by professional secrecy."

Table XXVIII.
Kruskal-Wallis test result of the OC usefulness perception by respondents' professional experience

Variable	χ^2	Significance
OC	0.366	0.8327

Notes: H_0: mean rank G_1 = mean rank G_2 = mean rank G_3. G_1: professional experience less than 5 years. G_2: professional experience between 5 and 10 years. G_3: professional experience more than 10 years

Finally, 75 respondents (41.66 percent) including 11 chief accountants/CFOs, 21 chartered accountants, 5 financial analysts, 4 portfolio managers, 12 bankers/credit analysts and 22 academics/accounting researchers, very interested in such research, requested a summary of the survey's results.

7. Conclusion

The purpose of this exploratory study was to explore the perception of both preparers and users of the usefulness of IC information that may be disclosed in the annual reports of Tunisian listed companies.

The results showed that these two groups of respondents perceive information on IC as well as its three components as useful for their decision-making purposes. Moreover, the results revealed that OC is the component of IC that is perceived as the most useful to respondents. In addition, the five items that are perceived as the most useful by respondents are: "Level of financial transparency," "Market share," "Existence of an internal audit service," "Certification of the company's products and services according to an external quality standard" and "Corporate reputation," whereas the five items that are perceived to be the least useful are: "Breakdown of staff by gender," "Employees social participation," "Breakdown of staff by age," "Breakdown of staff by seniority" and "Relationships with trade union." Furthermore, this study showed that the perception of preparers and users of annual reports as to the usefulness of IC items does not vary according to sex, age, function, educational level and specialty. This result is very beneficial for companies since they do not need to provide different information to individuals who are of different sex, age, function, educational level and specialty, although professional experience is a determinant of the usefulness perception of IC. Finally, this research has contributed to a better understanding of the usefulness of IC information, especially in the Tunisian context which is fairly virgin and lacks research of this type.

These results contribute in several respects to previous literature on IC information usefulness. In empirical terms, this study explored the usefulness perception of IC information from a stakeholder perspective by integrating the perception of five users and preparers groups (chief accountants/CFOs, chartered accountants/auditors, financial analysts/portfolios managers, credit analysts/bankers and academics/accounting researchers), which is lacking in the literature that privileged the perception of managers from a managerial viewpoint or that of financial analysts and portfolios managers from a purely financial perspective.

In methodological terms, this study constructed, through the questionnaire approach, an IC index reflecting the different IC information demands of five groups of stakeholders. It is a self-constructed index and serves as a guide of "best practices" in IC information reporting for companies.

In practical terms, the study's results may be of interest to the accounting standard bodies which, in order to fill informational gaps between companies and their various stakeholders, could regulate the IC information disclosure, as there are no generally accepted IC reporting guidelines in Tunisia and around the world, by developing relevant communication standards in accordance with stakeholders' needs and expectations. They may identify information items that should be considered as a priority by making them mandatory for disclosure purposes, and other items voluntary.

The results may also be of interest to companies and accounting practitioners who are involved in the preparation of accounting and financial information. To the extent that users perceive IC as useful, managers are encouraged to disclose more information about this hidden capital in their annual reports in order to improve their transparency. The results can therefore be of great importance for Tunisian listed companies, as studies of this kind can improve their understanding of the different users' needs in terms of IC information.

Users prefer to have more information, although increased information disclosure is not without costs for companies. Moreover, this research is important insofar as it helps to identify IC items that are considered more useful than others. Thus, the items that are perceived as the most useful should be disclosed before those that are perceived to be the least useful.

By inquiring about different IC stakeholders' demands, managers could thus define a useful communication strategy to improve transparency and to respond to the information needs of their users, thereby allowing the attraction of new partners as well as the increase in shares market, and the improvement of company's reputation (Branco and Rodrigues, 2006).

Pursuant to stakeholder theory, if companies satisfy stakeholders' needs, they should establish and maintain good relationships with them, and additionally "[…] gain support and approval from them (e.g. loyalty of customers) or distract their opposition and disapproval, which is beneficial for the organization to survive and succeed in a sustainable manner in society" (An *et al.*, 2011, p. 575).

The results can finally be of interest to various stakeholders (investors, financial analysts, creditors, employees, customers, suppliers, the government, etc.) insofar as they provide an overview of various IC information demands. Stakeholders would be able to assess company's value more reliably and more adequately.

Despite its contributions, this exploratory study is not exempt from some limitations. First of all, the use of the questionnaire's methodology, which depends on the willingness and the involvement of respondents, could raise some difficulties and hamper the relevance of the used measures. The internal validity constraint is always present. It is possible that the interviewees do not really express what they think. Indeed, there are for respondents risks of misunderstanding questions, although brief descriptions were added to the majority of questionnaire's items to provide more explanations of the terms and to ensure that all respondents had comparable understandings of the items. In addition, this study used a single research method based on the questionnaire approach and it is simply a perception study focused on only IC information usefulness and not on other IC interesting topics.

To overcome such limitations, some avenues for future research are suggested. A first perspective is to apply other qualitative research, such as interviews or mixed methods, in order to broaden the findings and to obtain a deeper insight into IC topics like IC measurement and reporting.

A second perspective is to construct an indicator of IC voluntary disclosure, which assesses, through a content analysis of companies annual reports and websites, the quantity and quality of IC information provided by companies and its adequacy with stakeholders informational demands as defined in this exploratory study.

A third perspective is to conduct an explanatory study by analyzing the potential determinants of IC voluntary disclosure in several corporate communication mediums, such as annual reports, IPO prospectuses, websites and presentations to financial analysts.

Such future research perspectives will open the way for further studies and continue the reflection on the usefulness and reporting of IC information.

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