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*Full Length Research Paper*

## The role of service attributes in customer satisfaction: An analysis of classified hotels in Cameroon

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This study aims to evaluate the influence of service dimensions' satisfaction on hotel guest's overall satisfaction. Confronting the theory originally stated with the specificity of satisfaction in the hotel sector, we developed hypotheses linking each of the service dimensions with overall satisfaction declared by the consumer. The data collected with a questionnaire were analyzed through a series of Multiple Component Analysis, cross-tabulations and Pearson Chi-square tests. Interpretation of the results allows us to reach the conclusion that three dimensions (groups of attributes) only out of the six initially considered contribute to overall satisfaction that is, service availability, interaction with the service provider and services received. The results of this research provide hotel managers with specific information. The first information is that word of mouth is one of the most important sources of information for hotel guests in Cameroon, so managers of these institutions should work towards stimulating it. Moreover, in order to increase guests' overall satisfaction, it is necessary to improve their satisfaction with the aforementioned service dimensions.

**Key words:** Service dimension, overall satisfaction, word-of-mouth.

### INTRODUCTION

Competition in the hotel sector is becoming increasingly harsh and seems to be accentuated by the fact that hotels in the same category offer services of the same level of quality. The question on how to undersell rivals and lead the market is a permanent concern for hotel managers. Thus, continuous quality improvement and its corollary customer satisfaction seem to be profitable strategies.

Customer satisfaction has been one of the major themes studied in marketing research for the past thirty

years (Oliver, 1980; Churchill and Surprenant, 1982; Yi, 1990; Fornell, 1992; Evrard, 1993; Anderson et al., 1994; Oliver, 1997). Tsaur et al. (2006) in Akyildiz and Argan (2010) believe that satisfaction is much more important for services because of their characteristics which increase the risk perceived by the customer. Measuring and managing customer satisfaction is a guarantee of survival, development and success in service industries.

Today, services are dominant in all economic systems (Tam, 2006; Jensen, 2011; Petri et al., 2012), which

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makes research to focus more attention on this sector (Olorunniwo et al., 2006). The service sector is likely to become a dominant force in developed countries, accounting for between 70 and 85% of gross national product (GNP) and about  $\frac{3}{4}$  of jobs (Johnston and Mitchel, 2008). This sector is also growing rapidly in developing countries such as Kenya, South Africa, etc., where it accounts for about 52% of GNP (Hill, 2007) and is supported by the tourism industry.

In Cameroon, the tertiary sector groups together, according to the nomenclature of activities in this country, trade, catering, hotels, telecommunications, etc. In 2006, the service sector accounted for 47% of GDP and the growth prospects for this sector for 2007 and 2008 were 3.9 and 4.8% respectively.

According to the General census on enterprises carried out by the National Institute of Statistics in 2009, 85.3% of Cameroon companies operate in this sector, compared with 0.4% in the primary sector and 1.4% in the secondary sector. The total number of enterprises in the tertiary sector is 85.109 in number, of which 49.192 are in the wholesale and retail trade, 1.074 in the social and personal services sector, and 1.074 in the hotel and catering industry (the third largest tertiary sub-sector). In terms of labor utilization and turnover, the tertiary sector accounts for 67.8% of total employment and 62% of total business turnover. For the period 2007 to 2011, for example, the tertiary sector has once again positioned itself as the main driver of growth in Cameroon.

The importance of tourism in the economic development of nations has been clearly established in recent years through improvement in statistical tools and the development of satellite accounts. This may explain the increasing interest in the management, and especially the marketing of hotels which constitute the lung of tourism (Reisinger, 2001).

Generally, customer satisfaction is very much important because when a customer has problems with a supplier, he talks to nine or ten people around him. Moreover, as shown by Kotler and Keller (2006), studies on consumer dissatisfaction confirm that clients are not satisfied with their purchases in 25% of cases (the company has good reasons to be concerned if these 25% of customers account for a significant share of sales), but only 5% of dissatisfied customers complain. The other 95% feel that it is not worth complaining, or they do not know how or where to complain, and may simply switch.

If we have the impression that when customers' are facing the problem of dissatisfaction, the provider will want to improve the service, then the question, "how to do this," is in another issue. As the authors' views differ, several models have attempted to identify how service dimensions contribute to satisfaction and dissatisfaction including two-factor theory, Oliver (1993) model, Kano's model, "importance-performance" model, tetraclass model, asymmetric contribution model, etc.

The literature in the field of satisfaction shows two main

approaches to satisfaction (Lichtle et al., 2002). The first analyses is the processes that generate satisfaction with regard to the disconfirmation paradigm for example Ngobo, (2000). The second is concerned with the modes of contribution of attributes to overall satisfaction (Evrard, 1993), according to this approach satisfaction is the outcome of attribute-level evaluation (Eusébio and Vieira, 2013); this is the approach we focus on in this research. It should be noted that there is a difference between overall satisfaction and satisfaction with the attributes. Overall, satisfaction is a holistic assessment of the consumer purchase or experience (Anderson et al., 1994; Fornell, 1992), whereas satisfaction with the attributes is a subjective assessment of consumer satisfaction which results from the performance of the attribute (Oliver, 1993).

Studies on tourist satisfaction arrive at the conclusion according to which overall satisfaction of the visitor depends largely on his satisfaction with the attributes of the destination; to this effect, Tribe and Snaith (1998) define consumer satisfaction with destination as the point at which the performance of the attributes of the destination exceeds the expectations of the tourist. Whereas, Chen et al. (2016) define it as consumers' judgment of whether the product or service provides a pleasurable level of consumption-related fulfillment.

This study, which has as main concern the measure of satisfaction focuses on the following main question:

Which service attributes contribute to overall satisfaction in the hotel sector?

More precisely we aim at identifying the service dimensions which can be used as leverages in improving overall hotel customer's satisfaction.

## LITERATURE REVIEW

### Attribute satisfaction

Attributes are one of the elements that have led to the buyer's identification of a possible response to a need (Filser, 1994). The product can thus respond through its perceived attributes. The general perception of attributes by the buyer is what is commonly called the "image of the attribute" which Lambin (1989) defines as "the set of mental representations both affective and cognitive that an individual or group of individuals associate to the product or the organization". Knowing this set of mental representations is decisive not only for the perception of attributes but also for the identification of actions to be undertaken by the company to better satisfy the expectations of the market. The product seen as a "basket of attributes" requires the purchaser who has a limited processing capacity to know the determining attributes.

Venette (1989) considers attributes as a set of physical or subjective characteristics of a product and assumes an evaluation by the consumer who seeks the prioritised or determining characteristics. Brée (1994) highlights the evaluation character by asserting that: "only a very small part of the characteristics is retained in the decision-making". These definitions link the attributes to the intrinsic or extrinsic characteristics of the product.

Satisfaction dimensions or service dimensions are characteristics of a service experience. They are usually represented by a group of attributes forming a consistent family. Some authors prefer to use the terms "determinants", "components", "factors" or attributes to designate them. There are a multitude of dimensions that an organization may want to evaluate. This work focuses on these dimensions' evaluation. For Westbrook (1983), a retail business should evaluate satisfaction with vendors, retail point environment, products and other factors in the perspective of determining customer satisfaction.

Similarly, more sophisticated versions of satisfaction surveys use mono-item measures by sub-processes or by attributes such as Quality-price relationship, response speed, and so on (Mefouté, 2010). Fisk et al. (1990) asserts that, during a complex service experience, the client assesses quality against three elements: participants, process, and physical environment.

From an evaluation perspective of the service encounter, other models incorporate these three elements in a somewhat different way: personnel, the physical environment of the service and the process of interaction between the service provider and the customer. Also, many of these models implicitly or explicitly acknowledge that services are usually performed in the presence of multiple customers. For example, the services of airlines, restaurants, hotels, hospitals, etc. are generally available to customers in the same service environment, the consequence being a mutual influence of customer service experiences (Groove and Fisk, 1997).

### **Overall satisfaction**

There is currently no consensus on the definition of satisfaction (Vanhamme, 2002; Giese and Cote, 2000; Yi, 1990). According to Vanhamme (2002), the term satisfaction comes from the Latin term "satis" (enough) and "facere" (do), meaning "to provide what is sought until it is enough". This author also emphasizes the extension of the satisfaction concept beyond the literal definition given by the French-language dictionary ("Petit Larousse illustré", 2007), which defines satisfaction as "contentment, or pleasure that results from the fulfillment of what someone expects, what someone desires".

Yi (1990) thinks that the definition of satisfaction differs according to the level of specificity, which Vanhamme

(2002) names horizontal level type of satisfaction or consumption / purchase experience stage on which satisfaction is judged; one can therefore distinguish among: satisfaction with the product, satisfaction with a purchase decision, satisfaction with a seller, etc. All these types of satisfaction brought together constitute what is termed overall satisfaction which Fornell (1992) defines as a holistic post-purchase evaluation. For Crompton and Love (1995), satisfaction is an emotional state that emerges as a result of an experience with a touristic product.

### **The link between attributes satisfaction and overall satisfaction**

Kivela (1996) states that consumers generally perceive services as a basket of attributes that could be different in their contribution to the evaluation or choice of product or service. Consumer satisfaction can be seen as the customer's point of view on the aspects of the service that are important to him. This definition agrees with the thought of Yoon and Uysal (2005) who state that satisfaction must be viewed from a multidimensional point of view in tourism, i.e. several variables observed must be taken into account in its evaluation.

Berry et al. (2002) propose three categories of signals that appear during the service experience: functional signals (the technical quality of the service); mechanical signals (the non-human elements of the service environment); and human signals (the behavior of the provider's employees). The evaluation of the service addresses these three elements. Consumer satisfaction can be assessed by studying the service experience entirely (Iglesias and Guillen, 2004).

The attribute package offered by the service provider includes the quality of infrastructure and equipment and staff performance (Sasser et al., 1978), the core service, peripheral services and the production system. All these aspects contribute to consumer satisfaction. For Zeithaml and Bitner (2000), consumer satisfaction can be assessed by identifying the important attributes and measuring the perception of these attributes and the overall satisfaction.

Lehtinen and Lehtinen (1991) believe that the presence of other clients and their behavior influence the interactive dimension of service quality, and this presence may have a greater impact on the quality of the service than contact with staff.

In addition, Lovelock (1983) provides some clarification on the evaluation of satisfaction with the service. He asserts that when customers need to be present during the service as it is the case in hotels, their satisfaction with the service will be influenced by the interaction they have with the staff, staff according to Sim et al. (2006) is the essence of hospitality's definition; the nature of the provider's facilities and equipment, furnishing and constructing facilities that comply with the requirements



of a modern guest will attract more guests (Blesic et al., 2011); and may be the characteristics of other customers using the service.

Also, problems of location and convenience (opening hours, waiting time, etc.) are of paramount importance, Lee et al. (2010) assert that location which customers value and expect include safety, ease of access (air, train, bus, public transportation and close connection to area attractions such as historic, business and pleasure).

According to Hughes (1991), the dichotomy between overall satisfaction and satisfaction with the attributes is normal in the tourism industry because several services offered by this industry include more than one aspect. In the accommodation sector, several studies have identified attributes that the tourist considers as important in assessing their satisfaction. Atkinson (1988) found that cleanliness, safety, value for money and courtesy of staff determine satisfaction.

Knutson (1988) found that the cleanliness of the room, suitability of location, promptness of service, safety and security, and familiarity of staff are important. Choi and Chu (op. cit.) concluded that quality of staff, room quality and value are more influential on tourist satisfaction. Hellstrand (2010) says that price plays a significant role in the perception that guests have about the quality of the hospitality product they are buying. For these guests price may be considered as a guideline for the level of service performance they expect.

For Pizam and Ellis (1999), satisfaction with a hosting experience is the overall sum of satisfaction with the elements or attributes of all the products and services which make up the experience. According to Griffin and Hauser (1993), an attribute-level analysis produces better results in tourism, because specific questions are asked in relation to each attribute with a view to determining whether certain attributes are more relevant than others in the prediction of overall satisfaction.

## Hypothesis

H<sub>1a</sub>: Satisfaction with service availability contributes positively and significantly to overall satisfaction

H<sub>1b</sub>: Satisfaction with service price contributes positively and significantly to overall satisfaction

H<sub>1c</sub>: satisfaction with infrastructure contributes positively and significantly to overall satisfaction

H<sub>1d</sub>: satisfaction from the interaction with the service provider contributes positively and significantly to overall satisfaction

H<sub>1e</sub>: satisfaction with the services received contributes positively and significantly to overall satisfaction

H<sub>1f</sub>: satisfaction from the interaction with other customers is positively and significantly related to overall satisfaction

## METHODOLOGY

The target population of the study is all the potential customers of

the classed hotels in the national territory of Cameroon. We were guided in the choice of hotels by quality orientation and number of customers. Five hundred questionnaires were distributed to customers' and 208 were returned, giving a return rate of 41.6%. The method mostly used for satisfaction surveys in the tourism sector consists, of identifying the most important attributes which determine the attraction of the destination and then asking tourists to evaluate these attributes on a symmetrical one-dimensional scale. On such a scale, the lowest value indicates high dissatisfaction with the attribute, while the highest value indicates high satisfaction with the attribute. All important attributes are therefore measured with a five-point Likert scale: 1 = not satisfied at all; 2 = somewhat not satisfied; 3 = indifferent; 4 = somewhat satisfied; 5 = completely satisfied. Overall satisfaction is measured using the modified scale of Oliver (1997)

## Data analysis

The data was entered in the CS Pro software version 4.2, and the analysis was carried out using SPAD 5.5, SPSS version 18/20 and EXCEL 2007 software. To construct the satisfaction indicator for each of the six dimensions presented above, we considered the set of satisfaction variables under this dimension. The problem to be solved then is how to aggregate these ordinal variables into a single synthetic indicator, which is a good summary of the variability in the different items? The Multiple Component Analysis is used to address this concern. This analysis is first performed with all satisfaction variables under a given dimension, to verify that all variables respect the Ordinal Consistency on the First factorial Axis (OCFA) obtained (which deals with checking for each Variable whether its modalities appear orderly along the first axis). If this is the case, the results of this Multiple Component Analysis are retained. In the contrary, modalities of the variables that do not comply with OCFA are grouped, or those modalities that do not contribute significantly to the determination of the first factor axis are excluded and a new MCA is performed on the new group of variables. From the results of the MCA retained, a summarised indicator of satisfaction is constructed. Let's consider the following:

- $Q$  the number of primary variables;
- $M_q$  the modality of the largest coordinate (in absolute value) on the first axis, for the variable  $q$ ;
- $x_q$  the absolute value of the modality  $M_q$  coordinate on the first axis;
- $1_q(i)$  an indicator function associated with the primary variable  $q$ , whose value is 1 when the individual  $i$  has adopted the modality  $M_q$  and 0 otherwise.
- $W_q$  The weight of the modality  $M_q$  within the set of modalities of greatest coordinate on the first factorial axis, with:

$$W_q = \frac{x_q}{\sum_{j=1}^Q x_j}$$

For each primary variable  $q$ , the following individual gain function is defined:

$$G_{M_q}(i) = \begin{cases} W_q * 1_q(i) & \text{if } M_q \text{ correspond à "satisfied"} \\ W_q * (1 - 1_q(i)) & \text{if } M_q \text{ correspond à "not satisfied"} \end{cases}$$

Thus, for a primary variable  $q$  whose modality  $M_q$  for which largest coordinate on the first factorial axis corresponds to "satisfied", each individual who adopted the modality  $M_q$  records a non-null gain ( $G_{M_q}(i) = W_q * 1_q(i)$ ), Whereas each individual who did not adopt the modality  $M_q$  registers a null gain ( $G_{M_q}(i) = W_q * 1_q(i) = 0$ ).

On the other hand, for a primary variable  $q$  whose modality  $M_q$  of greatest coordinate on the first factorial axis corresponds to "not satisfied", each individual who adopted the modality  $M_q$  registers a null gain ( $G_{Mq}(i) = W_q * (1 - 1_q(i)) = 0$ ), whereas each individual who did not adopt the modality  $M_q$  records a non-null gain ( $G_{Mq}(i) = W_q * (1 - 1_q(i))$ ).

The value of the summarised indicator for the individual is then determined as the sum of his gains on the set of primary variables as follows:

$$SAT(i) = \sum_{q=1}^q G_{Mq}(i)$$

The values of this indicator range from 0 to 1, and an individual is said to be globally satisfied with the dimension considered when his level of satisfaction for this indicator is greater than 0.5.

## RESULTS AND DISCUSSION

These results will include the sample's descriptive results, and the construction of indicators of satisfaction for the various service dimensions considering the methodology that was initially exposed.

### Descriptive results of the sample

The sample remains dominated by men (68%) means they are the main customers' of hotels in Cameroon. This observation is justified on the one hand by the fact that the activities carried out by men make them more mobile than women.

Indeed, in his posture as the head of the household, a man is forced to continually seek the welfare of his family, which leads him to reside almost everywhere where he can create an income. On the other hand, the majority of sociological studies have established that in one case out of two, the hotel bill of a woman is paid by a man and satisfaction with the use of a product is more varied for men than for women.

Also, the choice of a hotel by the customer is mainly influenced by the hotel's image (about 46% of the respondents chose the hotel in which they stayed because of the good image of the group to which the hotel belongs). Only two people out of ten choose their hotel based on price; In general hotels of the same category are supposed to offer services of the same level of quality, under such conditions, the rational customer would logically choose the hotel that charges the lowest prices. It should be noted that 27% of hotel guests choose their hotel based on its closeness to an important place. This place is either the place where they stay when visiting a country or their work site.

As a result, newly-established hotels should develop partnerships with renowned groups or hotel chains in

order to succeed, as they benefit from their image. Another important aspect which should not be neglected is location.

### Construction of satisfaction Indicators for service dimensions

We are going to show details on the way indicators were constructed for two dimensions, and for the other dimensions only comments of the results will be presented.

#### Availability of services

The initial variables measuring satisfaction with the availability of services are satisfaction with location, satisfaction with accessibility by road, satisfaction with orientation within the hotel and satisfaction with availability of information on services.

For each primary variable, the multiple component analysis enabled us to determine the weights assigned to the modality "not satisfied" which carries the greatest coordinate (in absolute value) on the first axis as shown in Table 1. The summarized indicator of satisfaction with availability of services for individual1 for example determined as follows:

$$23.8\% (1-1) + 33\% (1-1) + 21\% (1-1) + 21.4\% (1-1) = 0.$$

Whereas, the summarized indicator of satisfaction with availability of services for the individual3 is calculated as follows:

$$23.8\% (1-0) + 33\% (1-0) + 21\% (1-1) + 21.4\% (1-1) = 57.4\%.$$

The summarized indicator for the other individuals is calculated in the same manner. This summarised indicator measures overall satisfaction for each individual in terms of availability of hotel services. It reveals that 89.4% of respondents are satisfied with availability of services (that is, 32.7% whose level of satisfaction is in between 0.5 and 7.5, added to 25% whose level of satisfaction is equal to 1) (Figure 1).

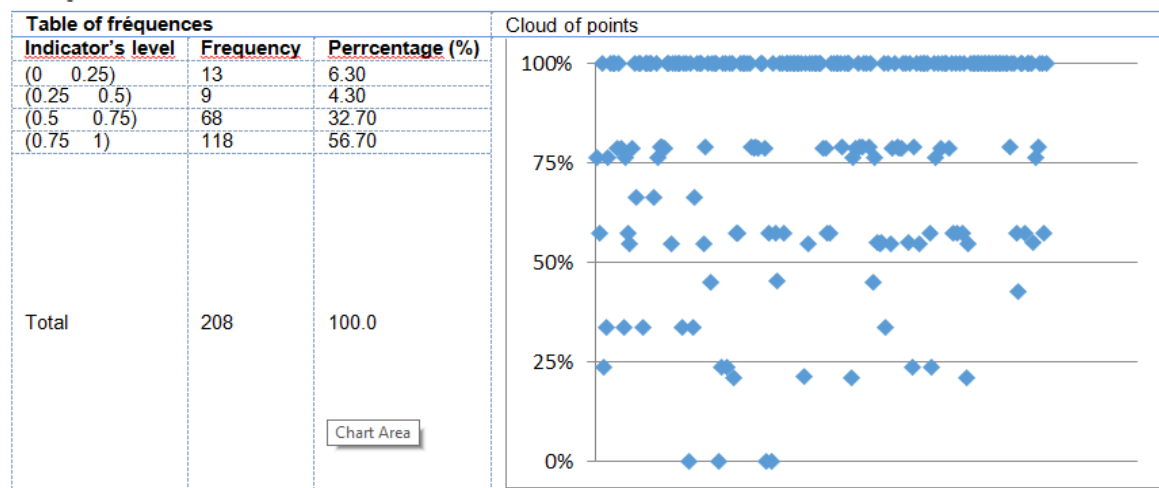
#### Services' price

The summarized indicator of satisfaction with price is built on the following variables: assessment of rooms' price relative to quality; and assessment of hotel's price relative to competition. For each primary variable, the multiple component analysis enabled us to determine the weight assigned to the modality "high" which carries the greatest coordinate (in absolute value) on the first axis as shown in Table 2.

For 70.2% of respondents (that is, 14.4% whose level

**Table 1.** Calculation of the individual values of the summarised indicator.

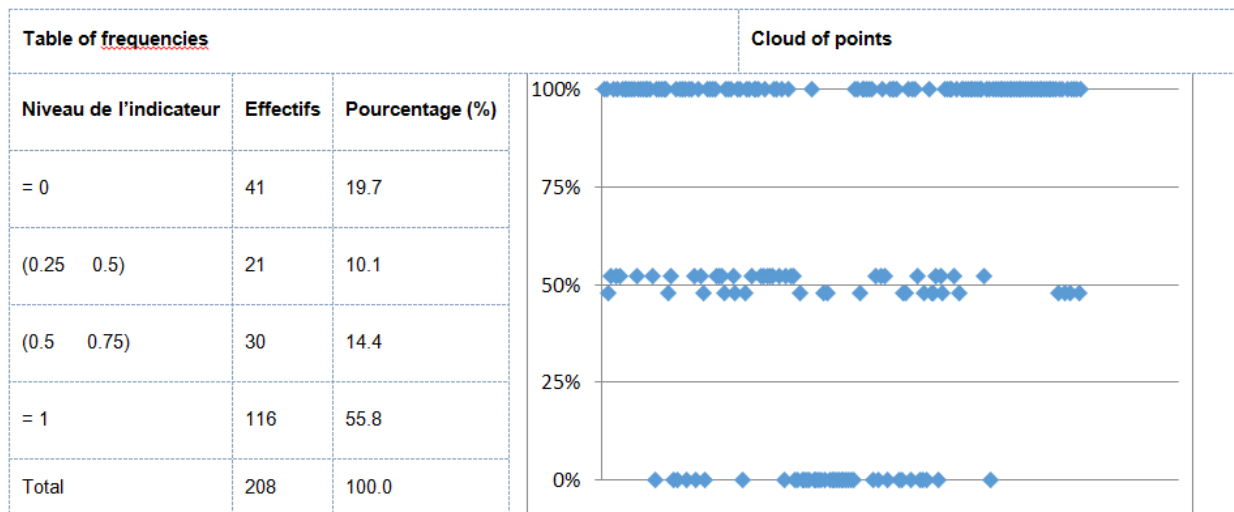
Initial variables	Satisfaction with location	Satisfaction with accessibility by road	Satisfaction with orientation within the hotel	Satisfaction with availability of information on services	Summarised indicator of satisfaction with availability of services
Greatest modality's coordinate on the first axis in absolute value	Not satisfied	Not satisfied	Not satisfied	Not satisfied	
Absolute value of the modality's coordinate on the first factorial axis	1.37	1.94	1.22	1.23	
Weight given to the modality $W_q$	23.8%	33.6%	21.2%	21.4%	
An example of indicator function $1_q(i)$					
individual1	1	1	1	1	
individual2	1	1	1	0	
individual3	0	0	1	1	
individual4	0	0	1	0	
individual5	0	0	0	0	
Individual gain function $G_{Mq}(i) = W_q * (1 - 1_q(i))$					
individual1	0.00	0.00	0.00	0.00	0.00
individual2	0.00	0.00	0.00	21.4%	0.21
individual3	23.8%	33.6%	0.00	0.00	0.57
individual4	23.8%	33.6%	0.00	21.4%	0.79
individual5	23.8%	33.6%	21.2%	21.4%	1.00



**Figure 1.** Summarised indicator of satisfaction with the availability of services.

**Table 2.** Calculation of the summarised indicator for the price of services.

Initial variables	Assessment of rooms' price relative to quality	Assessment of hotel's price relative to competition
Modality $M_q$ carrying the greatest coordinate (in absolute value) on the first axis	High	High
Coordinate of the modality $M_q$ on the first factorial axis	-1.09	-1.19
Individual weight or gain associated to the modality	47.9%	52.1%

**Figure 2.** Summarised indicator of satisfaction with the price of services.

of satisfaction is in between 0.5 and 0.75, added to 55.8% whose level of satisfaction is equal to 1), this indicator's level is greater than 0.5. It was also found that a large majority of respondents (55.8%) had maximum satisfaction with services' price (Figure 2).

Through the same methodological approach, a summarised indicator of satisfaction was constructed for each of the remaining dimensions.

### Infrastructure

The summarized indicator of satisfaction with infrastructure was built on the following variables: external appearance of the hotel, space within the hotel, equipment available to guests, medical assistance and state of the swimming pool. For each primary variable, the multiple component analysis enabled us to determine the weight assigned to the modality "not satisfied" for the first three attributes, and "satisfied" for the last two which carry the greatest coordinate (in absolute value) on the first axis respectively as follows: 22.8, 23.6, 17.7, 22.0 and 14.0%. According to this indicator, only 51.9% of

respondents are satisfied with the infrastructure of the hotels in which they stay (that is, 32.7% whose satisfaction is in between 0.5 and 0.75, added to 19.2% whose satisfaction is equal to 1).

### Interaction with the service provider

The summarized indicator of satisfaction for this dimension was built on staff physical appearance, mastery of customer language, reception, promptness to help customers, staff technical competence and staff relational abilities. For each of these variables, the multiple component analysis enabled us to determine the weight assigned to the modality "not satisfied" which carries the greatest coordinate (in absolute value) on the first axis respectively as follows: 17.4, 16.1, 18.8, 15.6, 14.7 and 17.4%. The indicator's level for interaction with service provider is greater than 0.5 for 85.1% of respondents (that is, 28.4% whose satisfaction is in between 0.5 and 0.9, added to 56.7% whose satisfaction is equal to 1). It is also found that 56.7% of respondents are highly satisfied with interaction with the service

provider.

### **Services received**

This indicator was built on the variables that follow: bathroom caring, general hygiene conditions in the hotel, rooms' lock system, beds' comfort, room service. The weights assigned to the modality "not satisfied" which has the greatest coordinate in absolute value on the first factorial axis of the multiple component analysis are respectively 19.6, 20.5, 16.5, 11.0, 16.4 and 16.1%. It is important to note that this indicator's level is greater than 0.5 for 85.1% of respondents (that is, 31.3% whose satisfaction is in between 0.5 and 90%, added to 53.8% whose satisfaction is equal to 1). It is also found that 53.8% of respondents have maximum satisfaction with the services received.

### **Interaction with other customers**

The indicator of satisfaction relative to interaction with other customers was built on ambiance created by the presence of other customers, respect of rules by the other customers and sympathy with the other customers. The weights assigned to the modality "not satisfied" which has the greatest coordinate in absolute value on the first factorial axis of the multiple component analysis are respectively 33.8, 32.6 and 33.5%, respectively. The result indicates that the indicator's level is greater than 0.5 for 61% of the respondents (that is, 13.9% whose satisfaction is in between 0.6 and 0.7, added to 47.1% whose satisfaction is equal to 1). It is also noted that 47.1% of respondents show maximum satisfaction with interaction with other clients.

### **Hypothesis testing**

To test the study hypothesis, we needed first of all to calculate the overall satisfaction index as shown in Table 3. Overall, 81.2% of customers are satisfied with hotel services.

### **Relationship between satisfaction with availability of service and overall satisfaction declared**

The results in Table 4 show that there is a dependency relationship between the summary indicator of satisfaction with the availability of services and each component of overall satisfaction. Indeed, the P-value of each of the Chi-square tests performed is below the threshold of significance retained (5%), which means that customers who are satisfied with the availability of services have a strong tendency to be globally satisfied.

Thus, the "availability of services" dimension effectively determines overall satisfaction for the customer. This result falls in line with the conclusion of Knutson (1988) who mentions suitability of the location as an important contributor to satisfaction among other factors. It is also supported by Lee et al (2010) who assert that location which customers value and expect include safety and ease of access (air, train, bus, public transportation and close connection to area attractions such as historic, business and pleasure).

### **Relationship between satisfaction with the services' price and overall satisfaction reported**

The results in the Table 5 show that there is no dependency relationship between the summary indicator of satisfaction with services' price and the components of overall satisfaction. Indeed, the P-value of each of the Chi-square tests performed is greater than 5%. Thus, the "price of services" dimension is not decisive in the overall satisfaction of the customer. This result contradicts the findings of Atkinson (1988) and Choi and Chu (2001) according to which value for money is an important contributor to guests' satisfaction. It may be justified by the fact that customers choose hotels according to their purchasing power.

### **Relationship between satisfaction with services received and overall satisfaction reported**

The results Table 6 indicate that there is a dependency relationship between the summarised indicator of satisfaction for services received and each component of overall satisfaction. Indeed, the P-value of each of the Chi-square tests performed is below the threshold of significance retained (5%), which means that clients who are satisfied with the quality of the services offered tend to be overall satisfied. Thus, the "services received" dimension effectively determines the customer's overall satisfaction. This result is supported by Pizam and Ellis (1999) who state that satisfaction with a hosting experience is the overall sum of satisfaction with the elements or attributes of all the products and services which make up the experience.

### **Relationship between satisfaction with infrastructure and overall satisfaction declared**

The results in the Table 7 show that there is no dependency relationship between the composite satisfaction indicator for infrastructure and the components of overall satisfaction. Indeed, the P-value of each of the Chi-square tests performed is greater than 5%. Thus, the size of the infrastructure is not decisive in

**Table 3.** Calculation of the overall satisfaction index.

Overall satisfaction index	Frequency	Percentage (%)
Not satisfied	39	18.8
Satisfied	169	81.2
Total	208	100.0

**Table 4.** Relationship and chi-square testing between the summarised indicator of satisfaction with availability of services and overall satisfaction variables.

Variable	Wise décision			Right décision			Felt pleased			
	Don't agree	Agree	Total	Don't agree	Agree	Total	Don't agree	Agree	Total	
Availability of services	Not satisfied	15	16	31	18	13	31	17	14	31
	Satisfied	28	145	173	26	151	177	14	161	175
	Total	43	161	204	44	164	208	31	175	206
Chi-square test	Pearson Chi-square			Pearson Chi-square			Pearson Chi-square			
	value	Significance		value	Significance		value	Significance		
	16.4	0.000**		29.8	0.000**		45.19	0.000**		

\*\*5% Significance ; \*10% Significance.

**Table 5.** Relationship and Chi-square testing between satisfaction index for service price and overall satisfaction variables.

Variable	Wise décision			Right décision			Felt pleased			
	Don't agree	Agree	Total	Don't agree	Agree	Total	Don't agree	Agree	Total	
Services price	Not satisfied	14	47	61	16	46	62	11	50	61
	Satisfied	29	114	143	28	118	146	20	125	145
	Total	43	161	204	44	164	208	31	175	206
Chi-square test	Pearson Chi-square			Pearson Chi-square			Pearson Chi-square			
	Value	Significance		Value	Significance		Value	Significance		
	0.2	0.668		1.1	0.284		0.60	0.437		

\*\*5% Significance ; \*10% Significance.

**Table 6.** Relationship and chi-square testing between the summarized indicator of satisfaction with services received and the overall satisfaction variables.

Variable	Wise décision			Right décision			Felt pleased			
	Don't agree	Agree	Total	Don't agree	Agree	Total	Don't agree	Agree	Total	
Services reçues	Not satisfied	14	17	31	16	15	31	16	15	31
	Satisfied	29	144	173	28	149	177	15	160	175
	Total	43	161	204	44	164	208	31	175	206
Chi-square test	Pearson Chi-square			Pearson Chi-square			Pearson Chi-square			
	Value	Significance		Value	Significance		Value	Significance		
	12.7	0.000**		20.3	0.000**		38.16	0.000**		

\*\*5% Significance ; \*10% Significance.

**Table 7.** Relationship and Chi-square testing between the summarised indicator of satisfaction with infrastructure and overall satisfaction variables.

Variable		Wise décision			Right décision			Felt pleased		
		Don't agree	Agree	Total	Don't agree	Agree	Total	Don't agree	Agree	Total
infrastructure	Not satisfied	26	71	97	31	68	99	23	75	98
	Satisfied	17	90	107	13	96	109	8	100	108
	Total	43	161	204	44	164	208	31	175	206
Chi-square test		Pearson Chi-square			Pearson Chi-square			Pearson Chi-square		
		Value	Significance		Value	Significance		Value	Significance	
		3.6	0.056*		11.7	0.076*		10.37	0.061*	

\*\*5% Significance; \*10% Significance.

**Table 8.** Cross-table and Chi-square testing between the summarised indicator of satisfaction relating to interaction with the provider and overall satisfaction variables.

Variable		Wise décision			Right décision			Felt pleased		
		Don't agree	Agree	Total	Don't agree	Agree	Total	Don't agree	Agree	Total
interaction with the service provider	Not satisfied	15	16	31	18	13	31	17	14	31
	Satisfied	28	145	173	26	151	177	14	161	175
	Total	43	161	204	44	164	208	31	175	206
Chi-square test		Pearson Chi-square			Pearson Chi-square			Pearson Chi-square		
		Value	Significance		Value	Significance		Value	Significance	
		16.4	0.000**		29.8	0.000**		45.19	0.000**	

\*\*5% Significance ; \*10% Significance.

the overall satisfaction of the customer. This result is supported by the conclusions of Bitner (1990) who mentions physical environment as a contributor to quality, Blesic et al. (2011) who assert that the nature of the provider's facilities and equipment that is, furnishing and constructing facilities that comply with the requirements of a modern guest will attract more guests (Sasser et al., 1978; Berry et al., 2002).

#### Relationship between satisfaction from interaction with service provider and overall satisfaction

The results in the Table 8 indicate that there is a dependency relationship between the summarised satisfaction indicator for the interaction with the service provider and each component of overall satisfaction. The P-value of each of the Chi-square tests performed is below the threshold of significance retained (5%), which means that customers who are satisfied with the interaction with the provider tend to be overall satisfied. Thus, this dimension effectively determines the customer's overall satisfaction. This result is supported by Sasser et al. (1978), Atkinson (1988), Knutson (1988),

Choi and Chu (2001), Berry et al. (2002) and Sim et al. (2006) who all mentioned quality of staff (or human signals) among other variables as an important contributor to overall satisfaction.

#### Relationship between satisfaction from the interaction with other customers and overall satisfaction reported

The results in the Table 9 indicate that there is no dependency relationship between the summary satisfaction indicator for interaction with other clients and the components of overall satisfaction. Indeed, the P-value of each of the Chi-square tests performed is greater than 5%. This result opposes the thoughts of Lovelock (1983), Lehtinen and Lehtinen (1991) and Groove and Fisk (1997).

#### CONCLUSION AND RECOMMENDATIONS

The objective of this study is to assess the contribution of attribute satisfaction to overall performance. Thus, we

**Table 9.** Cross-table and chi-square testing between the summarised indicator of satisfaction from interaction with other guests and overall satisfaction variables.

Variable		Wise décision			Right décision			Felt pleased		
		Don't agree	Agree	Total	Don't agree	Agree	Total	Don't agree	Agree	Total
Interaction with other customers	Not satisfied	31	49	80	26	55	81	24	57	81
	Satisfied	12	112	124	18	109	127	7	118	125
	Total	43	161	204	44	164	208	31	175	206
Chi-square test		Pearson Chi-square			Pearson Chi-square			Pearson Chi-square		
		Value	Significance		Value	Significance		Value	Significance	
		0.23	0.692		1.5	0.293		0.82	0.702	

\*\*5% Significance ; \*10% Significance.

came out with a questionnaire and collected data that was treated, making use of multiple component analysis and then cross-tables and correlations. The interpretation of the results allows us to reach the following conclusion:

Three dimensions (or groups of attributes) only among the six initially considered contribute to overall satisfaction of hotel customers in Cameroon namely availability of the service, interaction with the service provider and the quality of services received. 89.4% of respondents are satisfied with the availability of the service, 85.1% of respondents are satisfied with the interaction with the provider and 85.1% of respondents are satisfied with the services received (levels of satisfaction with these dimensions are above 0.5 On a scale of 0 to 1). Making hypothesis 1a, 1d and 1e to be verified.

The results of this research provide hotel managers with precise information: the first information is that word-of-mouth is one of the most important sources of information for hotel clients in Cameroon, so managers of these institutions should endeavor to stimulate it. Moreover, to increase the overall level of client satisfaction, it is necessary that hotels in Cameroon improve the level of customers' satisfaction with the dimensions of availability, services received and interaction with the service provider.

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*Full Length Research Paper*

## Does the market reward integrated report quality?

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Although some studies show the benefits of adopting integrated reporting (IR), its real value has not yet been sufficiently investigated. As integrated reporting development implies high costs for the company, the management has to evaluate the economic advantage of such investment. This study aims to establish whether a high quality IR influences firm market value. Specifically, we investigate whether shareholders take into account the good quality disclosure provided by IR in their investment assessments and reward the outstanding firms. We proxy high quality disclosure by the awards assigned to IRs published by a sample of South African listed companies for the period 2013 to 2016. Using event study methodology, we found out that the stock market reacts positively to award announcements, the value attributed by shareholders to the quality of IR is persistent, grows over time and is particularly high in non-financial companies. This evidence should encourage managers to invest in improving IR disclosure quality.

**Key words:** Integrated reporting, corporate social responsibility, market value, disclosure quality, event study, shareholder.

### INTRODUCTION

Environmental and social (ES) reporting has attracted increasing attention over the past 20 years (Eccles et al., 2011a,b; Delgado-Ceballos et al., 2014). Initially, ES disclosure was incorporated into corporate annual (financial) reports.

Subsequently, it became less dependent on these and appeared in various media and stand-alone reports. The poor integration of ES disclosure with financial disclosure complicates the reading of policies, practices and impacts by stakeholders (Yongvanich and Guthrie, 2006; Eccles and Krzus, 2010; Cohen et al., 2012). Although

sustainability reports drafted in accordance with Global Reporting Initiative (GRI) standards can be full of information on ES and economic policies and practices, the connections between these aspects can be difficult for the reader to discern. The need for a complete picture of all these issues led to integrated reporting (IR) (De Villiers et al., 2014). In 2010, the International Integrated Reporting Council (IIRC) was established and, in late 2013, it issued the final version of the Integrated Reporting Framework (IIRC, 2013a, b).

Scholars (Eccles and Krzus, 2010; Frías –Aceituno et

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al., 2014) and standard setters (GRI, 2016; IIRC, 2013a) agree that traditional financial and sustainability reporting is no longer able to deliver the information that investors ask in order to make informed decisions. IR aims to help address that gap (IIRC, 2013a; Eccles and Krzus, 2014) by providing concise information “about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term” (IIRC, 2013a). The principle of “connectivity of information” is a key element in understanding firm activities: the interrelationships between different types of capital (financial, manufactured, intellectual, social and relationship, human, and natural), and the effects of firm activities on these “multiple capitals” need to be clearly identified by companies. In this context, IR should qualitatively improve the available information to investors (IIRC, 2013b). Its main ‘target audience’ consists of investors and capital providers. As IIRC (2013a) claims that the main IR users are financial capital providers, we focus on shareholders.

IR is more than just a report: it focuses on integrated thinking (IIRC, 2013a; KPMG, 2011) and requires cross-functional collaboration within the organization, and investments in information systems, skills and expertise. As IR development implies high costs for the company, the management has to evaluate the economic advantage of such investment. Eccles and Saltzman (2011) investigate the advantages of IR, which in their view consist of:

- (1) Internal benefits, such as improvements in decisions regarding internal resource allocation, increased engagement with stakeholders and reduced reputational risk.
- (2) External market benefits, such as catering for mainstream investors seeking environmental, social and governance (ESG) information, featuring in sustainability indices, and making sure that data vendors provide accurate non-financial information about the company.
- (3) Management of regulatory risk, such as making preparation for possible global regulation, responding to requests from stock exchanges, and having a voice in the development of frameworks and standards.

This emerges also from an investor survey conducted by PwC on corporate performance (PwC, 2014) addressed to 85 institutional investors (buy-side, sell-side and ratings agencies). This survey confirms that investors see a direct link between the quality of reporting and the quality of management. However, at the same time, investors are aware that managers have to maintain a competitive advantage and, for this reason, they are reluctant to reveal too much information about their business models, strategies and risks.

The IIRC highlights strategic, operational and

organizational benefits such as the different and better exchange of information between the board of directors and management, a better establishment of the causal relationship between business model, strategy and performance, a more united way of working across different functions; a decision-making process based on a better quality and interconnectivity of information; access to better and new information, more transparency for stakeholders (IIRC, 2013b). Although several studies show the benefits of adopting IR (Hoque, 2017), less is known about its market impact (Serafeim, 2015; Zhou et al., 2017), and its real value has not yet been sufficiently investigated.

This study aims to fill this gap. Specifically, we try to answer the following question put by De Villiers et al. (2014): ‘Is the decision to disclose an IR value relevant, in other words, do the financial markets react or reflect a value premium in any way?’. For this reason, we test whether high-quality IR influences firm market value. Specifically, we investigate whether shareholders, IR's main target audience, take into account the quality of disclosure provided by IR in their investment assessments and duly reward outstanding firms. We focus on a sample of listed companies based in South Africa, where IR is mandatory. As a proxy of disclosure quality we consider the IIRC-recognized awards assigned to IR. We use event study methodology to measure the effect on the stock price of IR award announcements. The study sample consists of 76 announcements regarding South African listed firms that received IR awards, as winners or finalists, between 2013 and 2016.

The results of this study show that shareholders appreciate the quality of financial and non-financial disclosure provided by IR: the stock market in fact reacts positively to award announcements. We also demonstrate that investors reward both firms being finalists and winners in an IR award competition. Finally, the study shows that the value attributed by shareholders to the quality of IR is persistent, grows over time and is particularly high for non-financial firms. From a managerial point of view, this study confirms the usefulness for companies of investing in integrated report quality (IRQ) and encourages managers to improve in this area. From the theoretical point of view, this study extends the empirical research on IR and its benefits. From the policy point of view, the work suggests that it is necessary not only to reinforce the quality of the IR, but there is also a need to develop shareholder awareness and reporting culture.

This paper falls in the area of empirical studies investigating the relationship between IRQ and market reaction. The study contribution to previous literature is manifold. First, we use an original proxy for quality disclosure: IR awards. To the best of our knowledge, this is the first study to adopt IR awards as a proxy of disclosure quality for analyzing stock market reaction.

This proxy, frequently used in studies of Total Quality Management (Hendricks and Singhal, 1996; Adams et al., 1999), resolves the limitations of alternative metrics used for assessing disclosure quality, because it relieves the researcher of the need to make subjective judgements. Award-giving and benchmarking organizations are in fact solely responsible for the adjudication processes and commentaries, but the IIRC recognizes that the criteria for the assessments are reasonably aligned with the international IR framework.

Second, unlike previous literature, which mainly used the standard valuation model developed by Ohlson, 1995 (Mervelskemper and Streit, 2017; Lee and Yeo, 2016; Semenova and Hassel, 2015) and OLS regression (Dhaliwal et al., 2012; Zhou et al., 2017), this study applies event study methodology to investigate the value-relevance of IRQ. Furthermore, we use a proprietary database, consisting of the dates of the first announcement made to the market of an IR award. Finally we observe the effects of the integrated reporting over time and for different sectors.

## LITERATURE REVIEW

Previous literature shows a positive link between quality of financial disclosure and firm value. More specifically, empirical research generally demonstrates a positive relationship between disclosure quality and analyst earnings forecasts (Barth et al., 2001; Hope, 2003; Plumlee, 2003).

Otherwise, many studies demonstrate the theoretical negative link between the level/quality of discretionary disclosures and cost of equity capital in terms of risk sharing (Merton, 1987), reduction of estimation/information risk (Barry and Brown, 1985; Coles et al., 1995), market liquidity and information asymmetry (Healy and Palepu, 2001; Diamond and Verrecchia, 1991; Easley and O'Hara, 2004). The format of the information is also important: some authors (Hodge et al., 2006; Kelton et al., 2010) show that market prices can be differently influenced by equivalent disclosure if it is presented in different ways.

Moreover, many analyses focus on the direct and indirect effects of Corporate Social Responsibility (CSR) disclosure on the stock market. Some studies investigate the share price impact of the announcements of sustainability report publications. These analyses show that in some cases the effect is almost nil (Carnevale et al., 2012), or is felt more strongly in certain stock markets than in others. In other cases, the announcement is rewarded only if the reports are certified while in others the investors assign a premium price only in the presence of high-quality sustainability disclosure (Guidry and Patten, 2010).

Other empirical evidence highlights the value relevance

of ES disclosure (Carnevale and Mazzucca, 2014; Qiu et al., 2016; Plumlee et al., 2015; Huang and Watson, 2015). More recent studies show how the quality of CSR disclosure positively influences the share price (Cheng et al., 2013; Griffin and Sun, 2013). These results confirm that, unlike some years ago (Milne and Chan, 1999; Banghøj and Plenborg, 2008), investors nowadays take full account of information on sustainability issues in their investment decisions (Qiu et al., 2016; Dhaliwal et al., 2011; Dhaliwal et al., 2012) and attribute a value to high-quality reporting. Unlike the aforementioned studies which analyze financial and non-financial information separately, literature on IR considers them jointly.

The study fits into the strand of literature on the relationship between IR and firm value. On the one hand, the IIRC (2013a) states the existence of a positive association between the two variables. This is thanks to the information set provided by IR to shareholders, which allows them to reduce costs of collecting and processing information (Sims, 2006; Veldkamp, 2006). Moreover, the main IR principles, such as materiality, conciseness, and connectivity (IIRC, 2013a), aiming to focus only on important matters related to the company value-creation capacity, contribute to mitigating the information overload and complexity problem. Furthermore, IR (IIRC, 2013a) can reduce the cost of capital in different ways:

- (1) By attenuating information asymmetry (Easley and O'Hara, 2004; Gietzmann and Ireland, 2005)
- (2) By expanding the firm investor base through comprehensive and free information on the firm activities (Merton, 1987), and
- (3) By reducing parameter uncertainty and estimation risk (Verrecchia, 2001; Beyer et al., 2010).

On the other hand, IR may be negatively associated with firm valuation because of the cost of proprietary disclosure (Verrecchia, 1990). IR contains information (on strategy, business models, opportunities and risks) that could give an advantage to competitors, increase costs of regulatory action and legal liabilities, and discourage firms from pursuing profitable business not compliant with claimed values or norms. Moreover, IR can increase direct compliance costs.

More specifically, this study focuses on the link between IRQ and market reaction. To date, many studies have focused on data from South Africa where IR is mandatory. Bernadi and Stark (2015) analyze user perceptions of IR value on a South African sample through analyst forecast accuracy. They focus on the period 2008 to 2012, when reporting regimes asked firms to implement IR on an "apply or explain" scheme. The authors demonstrate that ESG disclosure transparency, measured by the Bloomberg ESG score, is associated with forecast accuracy after the introduction of the IR regime.

Lee and Yeo (2016) also found a positive association between firm valuation and IR disclosure. Their results suggest that firms with greater external financing needs, when they publish high quality IRs, show better firm valuations than those publishing low quality IRs in terms of both stock market and accounting performance. The authors measure IRQ by means of a firm-specific score based on the degree of alignment with the IR disclosure framework. Moreover, Barth et al. (2016) demonstrate the positive association between IRQ, stock liquidity and expected cash flows. Their proxy for IRQ is based on a score underlying the annual EY Excellence in Integrated Reporting Awards.

Furthermore, Zhou et al. (2017), analyzing a sample of companies listed on the Johannesburg Stock Exchange (JSE), found that when the compliance level with the IR framework grows, analyst forecast error decreases and saving in cost of equity capital increase. In addition, Baboukardos and Rimmel (2016) investigate whether the value relevance of summary accounting information in South Africa has increased after the mandatory adoption of IR. Their results show a growth in the value relevance of earnings, but a decline in that of net assets, maybe because of better risk disclosures.

Other studies focus on worldwide samples.

Mervelskemper and Streit (2017) demonstrate that companies publishing IRs, if compared with those preferring stand-alone ESG reports, show a higher degree of value-relevance of ESG performance scores. Moreover, Arguelles et al. (2015) find that disclosures compliant with IIRC principles are appreciated by capital markets increasingly over time.

However, other authors state that IR, compared to a separate ESG report, does not increase investor valuation of ESG performance (Stubbs et al., 2014). The relationship between IR and firm valuation remains an empirical topic. In this context, extending the results of Lee and Yeo (2016), we expect that:

**Hypothesis 1:** *Shareholders positively react to the good quality disclosure provided by IR.*

**Hypothesis 2:** *The “reward effect” associated with companies providing IR good quality disclosure is persistent.*

Investors are often not instantaneously able to process the content of IR information (Arguelles, 2015) and, for this reason, capital markets may not recognize changes in the value relevance of disclosures immediately, but rather in subsequent years (Branco and Rodrigues, 2006). Therefore, we predict that:

**Hypothesis 3:** *Shareholders reward the good quality disclosure provided by IR increasingly over time.*

Finally, González-Benito and González-Benito (2006) observes that stakeholder control levels and expectations

are different across industries showing different polluting potentials. Specifically, oil, chemical and paper industries are often perceived as associated with stronger environmental impacts than the financial sector (Matute-Vallejo et al., 2011). Traditionally, financial companies are considered to have low direct environmental impact and environmental risk. More recently, some studies have however focused on the indirect impact of the banking activity, related to lending (Sarokin and Schulkin, 1991; Thompson and Cowton, 2004; Viganò and Nicolai, 2009). Banks are in fact responsible for financing company sustainable development (Relano and Paulet, 2012; Scholtens, 2009) through socially responsible investments and lending policies (Simpson and Kohers, 2002). In this context, we expect that:

**Hypothesis 4:** *Shareholders reward the good quality disclosure provided by IR more in non-financial than in financial companies.*

## Sample

The study sample consists of 76 observations relating to companies belonging to different industries, as shown in Table 1, and listed on the JSE, which have been finalists and winners in awards ceremonies for the best IR. The study data is from South Africa, where IR is mandatory. 2010 King III recommendations require in fact to companies listed on the JSE to produce an IR in place of their annual financial and sustainability reports. If firms do not comply with this suggestion, they explain the reasons. The focus on a South African sample allows us to avoid any concerns about:

- (1) Immaturity of the market, despite a high heterogeneity among corporate reports produced by companies, as showed by Doni et al. (2016)
- (2) Self-selection arising when IR is voluntary (Pope and McLeay, 2011), and
- (3) The differences between ESG disclosures across countries due to different cultural and social norms or regulations (Ioannou and Serafeim, 2016).

To ensure that the awards assigned were consistent with the spirit, logic and practice of the IIRC, we selected only the award-giving and benchmarking organizations shown on the ‘Recognized Reports’ on the IIRC website for the period 2013 to 2016. We excluded previous years because it was only in November 2012 that the IIRC released a prototype of the International IR framework, outlining the key considerations that are critical to IR. We selected companies listed on the JSE and looked for the date of the first announcement in the press of their IR award or nomination for the award. We used Factiva and conducted a survey of the websites of the study sample

**Table 1.** The sample by industry.

Industry	Number of observations
Clothing	4
Conglomerate	6
Electrical	1
Gold	5
Healthcare	3
Materials	7
Metals and mining	4
Mining	5
Oil and gas	8
Retailing	1
Steel	3
Telecommunications	4
Financial	25
Total	76

companies and websites of the Award Organizations. The Award Organizations and Award categories considered (shown in Table 2 by year) are:

- (1) EY excellence in integrated reporting awards
- (2) PwC's building public trust 'excellence in reporting' awards
- (3) CSSA integrated reporting awards
- (4) Nikonki top 100 JSE listed companies integrated reporting awards (Tables 1 and 2).

Table 1 shows the number of observations of 76 listed companies that have been finalists and winners in awards ceremonies for the best integrated reports over different industries in the period 2013 to 2016. The data source is the "recognized reports" on the IIRC website for the years 2013, 2014, 2015, and 2016. Table 2 shows the number of observations of 76 listed companies over different industries that were finalists and winners in four different awards ceremonies for the best IR in the period 2013 to 2016. The data source is the "recognized reports" on the IIRC website for the years 2013, 2014, 2015 and 2016.

## METHODOLOGY

The effect on stock prices of IR award announcements is measured by using the event study methodology (MacKinlay, 1997). The study sample consists of 76 observations regarding South African listed firms which received an integrated report award, as winners or finalists, between 2013 and 2016. In order to get accurate evidence, we eliminate all events that were announced at the same time as other new, price relevant information. We run some event studies to estimate abnormal returns following IR award announcements, which are thought to explain stock return changes. These abnormal returns are obtained as the difference between the actual stock return registered from the listed company  $i$  on day  $t$ ,

that is, the day when the IR award is announced, and the expected return that the security should have registered given the absence of the event. Following previous literature (Campbell et al., 1997), we use Sharpe (1963) market model in order to estimate expected returns:

$$\hat{R}_{i,t} = \alpha_i + \beta_i R_{mkt,t} + \varepsilon_{i,t} \quad (1)$$

Where:

$\hat{R}_{i,t}$  is the stock return of company  $i$  (which received an IR award) on day  $t$ ;  $\alpha_i$  is the intercept of the regression line;  $\beta_i$  is the slope of the regression line;  $R_{mkt,t}$  is the national market index return on day  $t$ ;  $\varepsilon_{i,t}$  is the random error.

The  $\alpha_i$  and  $\beta_i$  coefficients for each firm are estimated by an ordinary least square (OLS) regression of  $\hat{R}_{i,t}$  on  $R_{mkt}$  for a 250 day time horizon (that is, from the 270th to the 21st day before the information announcement). We define the date of the IR award announcement as day 0, and the event window as the period ranging from  $-\tau_1$  days before and  $+\tau_2$  days after day 0. Following a standard approach, we consider different window lengths. The widest event window extends from 10 days before day 0 to 10 days after. We consider event windows both before and after the IR award news, as we expect that some market participants could have access to this information prior to its official announcement. The abnormal return ( $AR_{i,t}$ ) due to the IR award announcement of company  $i$  for day  $t$  is measured as follows:

$$AR_{i,t} = R_{i,t} - (\hat{\alpha}_i + \hat{\beta}_i R_{mkt,t}) \quad (2)$$

The average abnormal return ( $\overline{AR}_t$ ) at each time  $t$  in the event window is estimated by aggregating the abnormal stock returns for all  $n$  company shares and calculating the average value:

$$\overline{AR}_t = \frac{1}{n} \sum_{i=1}^n AR_{i,t} \quad (3)$$

By summing all  $AR_{i,t}$  over the days in the event window, that is, within the event period  $[\tau_1, \tau_2]$ , we determine the cumulative abnormal return  $CAR_i(\tau_1, \tau_2)$  for each share  $i$ :

$$CAR_i(\tau_1, \tau_2) = \sum_{t=\tau_1}^{\tau_2} AR_{i,t} \quad (4)$$

We finally obtain the mean CARs in the different event windows ( $\overline{CAR}_i(\tau_1, \tau_2)$ ) by estimating the arithmetical average value of  $CAR_i(\tau_1, \tau_2)$  for all  $n$  stocks:

$$\overline{CAR}_i(\tau_1, \tau_2) = \frac{1}{n} \sum_{i=1}^n CAR_i(\tau_1, \tau_2) \quad (5)$$

We verify CAR statistical significance using three tests. The first parametric test ( $T_1$ ) corroborates the null hypothesis stating that the new information announced to the market does not impact the cumulative abnormal returns (Campbell et al., 1997):

**Table 2.** The sample by industry, award organization and year.

Industry	Award	2013	2014	2015	2016	Total
Clothing	CSSA	1	-	-	-	1
	EY	1	-	1	-	2
	NIKONKY	-	-	1	-	1
Conglomerate	CSSA	1	-	-	-	1
	NIKONKY	1	1	1	2	5
Electrical	CSSA	-	-	-	1	1
Financial	CSSA	1		1	2	4
	EY	3	2	4	4	13
	NIKONKY	1	2	4	1	8
Gold	CSSA	1	-	-	-	1
	EY	1	1	-	-	2
	NIKONKY	-	1	-	-	1
	PWC	1		-	-	1
Healthcare	CSSA	-		1	-	1
	EY	-	2	-	-	2
Materials	CSSA	-	-	-	1	1
	EY	-	-	-	2	2
	NIKONKY	1	-	1	2	4
Metals and mining	EY	-	-	1	1	2
	NIKONKY	-	1	-	1	2
Mining	EY	1	1	-	-	2
	NIKONKY	1	1	-	1	3
Oil and gas	CSSA	1	-	-	1	2
	EY	1	-	1	1	3
	NIKONKY	1	1	1	-	3
Retailing	NIKONKY	1	-	-	-	1
Steel	NIKONKY	-	2	1		3
Telecommunications	CSSA				1	1
	EY	1		1	1	3
Total		20	15	19	22	76

$$T_1 = \frac{\overline{CAR}(\tau_1, \tau_2)}{[\hat{\sigma}^2(\tau_1, \tau_2)]^{\frac{1}{2}}} \approx N(0,1) \quad (6)$$

As the popular  $T_1$  can be biased in evaluating CAR statistical significance in short-time horizon (Harrington and Shrider, 2007),

we also applied a second parametric test ( $T_2$ ), suggested by Boehmer et al. (1991), that is shown to be robust to an event-induced variance increase:

$$T_2 = \sqrt{N} \frac{\overline{SCAR}(\tau_1, \tau_2)}{\sqrt{\frac{1}{N-1} \sum (SCAR(\tau_1, \tau_2) - \overline{SCAR}(\tau_1, \tau_2))^2}} \approx T\left(0, \frac{g}{g-2}\right) \quad (7)$$

with  $g > 2$ , where  $N$  is the number of shares and  $SCAR_i(\tau_1, \tau_2)$  is the standardised abnormal return on security  $i$  at day  $t$ .  $SCAR_i(\tau_1, \tau_2)$  is estimated using the approach suggested by Mikkelsen and Parth (1988):

$$SCAR_{i,t} = \frac{CAR_i(\tau_1, \tau_2)}{\hat{\sigma}_i \sqrt{T_s + \frac{T_s^2}{T} + \frac{\sum_{i=\tau_1}^{\tau_2} (R_{m,t} - T_s \bar{R}_m)}{\sum_{i=1}^T (R_{m,t} - \bar{R}_m)}} \quad (8)$$

Where:

$\tau_1$  and  $\tau_2$  are respectively the first and last days in the event window,  $CAR_i(\tau_1, \tau_2)$  is the cumulative abnormal return of share  $i$  in the event window  $(\tau_1, \tau_2)$ ,  $\bar{R}_m$  is the mean return on market index in the estimation period,  $\hat{\sigma}_i$  is the estimated standard deviation of abnormal return on share  $i$ ,  $T$  is the number of days in the estimation period and  $T_s$  is the number of days in the event window. The  $T_2$  shows a T-distribution with  $T-2$  degrees of freedom, and converges to a unit normal.

Moreover, we carry on a non-parametric test ( $T_3$ ) to confirm evidence obtained by  $T_1$  and  $T_2$ . The sign test ( $T_3$ ) (Campbell et al., 1997; MacKinlay, 1997) is estimated as follows:

$$T_3 = \left[ \frac{N^{(+)} - 0.5N}{N} \right] \frac{1}{0.5} \approx N(0,1) \quad (9)$$

Where:

$N$  is the number of events and  $N^{(+)}$  is the number of events with a positive CAR. The null hypothesis states that IR award announcements are not followed by significant cumulative abnormal returns. Therefore, if a significant number of positive CARs is found, the null hypothesis is rejected.

We consider as statistically significant CARs that passed all the three tests described earlier. All these tests do not have an economic meaning, but only a statistical value. When the test value exceeds the threshold of 1.294, 1.667 and 2.381, the mean CAR is statistically significant at the 10%, 5% and 1% level, respectively. For this reason, all values (both positive and negative) lower than 1.294 are for the purposes of interpretation, completely equivalent, and inform that the mean CARs to which they refer are not statistically significant.

## RESULTS AND DISCUSSION

In order to evaluate company share price reaction to IR award news, we conducted separate analyses for the whole sample and some subsamples. Focusing on the global sample (Table 3), the study results show that the mean CARs are positive in almost all event windows. This means that IR award news is appreciated by the market. Table 3 also reveals the results of event studies conducted on the data for 76 cases of IR awards announced between 2013 and 2016. We measured the company normal returns using the market model. The CAR statistical significance was verified using three tests ( $T_1$ ,  $T_2$  and  $T_3$ ), reported in Equations 6, 7 and 9.

However, the statistical significance of the study estimates and CAR values vary across different event windows. Two event windows prior to day 0 show high statistically significant CARs at a 95% confidence level or above. Specifically, event windows (-10; -1) and (-5; -1) display average CARs of 1.36 and 0.76%, respectively. This means either that IR award news is easy for investors to forecast, or that some market participants probably have access to prior information.

We do not find statistically significant results either after day 0 or in the symmetric event windows. This evidence suggests that shareholders take into account the good quality of disclosure provided by IR in their financial choices, as suggested by Hypothesis 1. However, these investors do not reward the outstanding firms after the IR award official announcements, but some days before them.

Moreover, we also investigated the existence of a positive market effect of IR award announcements not only for top-prize winning companies, but also for competitors positioned at the top of the ranking. For this purpose, we subdivided our sample into two subsamples: news about winning firms (13 observations) and news about firms that received a merit or were finalists in an IR award competition (63 observations). In the case of winners, a 'reward effect' would probably be obvious; furthermore, there is less data on firms not awarded top prize. For this reason, the analysis focuses only on finalist firms (Table 4) which shows the results of event studies conducted on the data for 63 cases of IR awards announced between 2013 and 2016. Here, the company's normal returns were measured using the market model. The CAR statistical significance is assessed using three tests ( $T_1$ ,  $T_2$  and  $T_3$ ), reported in Equations 6, 7 and 9.

The study results show that shareholders react very favorably to news about companies receiving a merit or being finalists in an IR award, as the mean CARs are positive in all event windows. Specifically, we notice statistically significant CARs of 1.39% and 0.68% in the event windows (-10; -1) and (-5, -1), respectively. The study interpretation of this result is that the news about firms being finalist in an IR award competition is likely to spread before the award ceremony. Statistically significant results are also registered in event windows following the announcement date.

Event window (0; 5) in fact shows statistically significant average CARs of 1.55%. This means that shareholders react positively to the announcement of IR award finalists in the 5 days after the day 0. Overall, higher average CARs are found in the symmetric event window (-5; 5), which shows positive and statistically significant mean CARs of 2.24%. These results can be interpreted as further evidence that shareholders take into account the good quality disclosure provided by IR in their investment assessments, as suggested by



**Table 3.** Average CARs and test statistics for the whole sample.

Event window	Number of observations	Number of firms	Mean CAR (%)	T1	T2	T3
(-10; 10)	76	29	1.225	1.277	0.981	1.376*
(-5; 5)	76	29	1.946	2.561***	1.556*	1.147
(-3; 3)	76	29	0.753	1.197	0.347	-0.229
(-10; -1)	76	29	1.362	2.528***	3.034***	2.982***
(-5; -1)	76	29	0.755	1.794**	1.763**	1.835**
(-3; -1)	76	29	0.237	0.484	1.168	0.688
(0; 10)	76	29	-0.137	-0.195	-0.798	0.229
(0; 5)	76	29	1.191	1.917**	0.931	1.147
(0; 3)	76	29	0.515	1.115	0.206	-0.229
(0; 1)	76	29	-0.024	-0.070	-1.117	0.459

\*, \*\*, \*\*\* denotes the statistical significance at 10, 5 and 1%, respectively (one-tailed test).

**Table 4.** Test statistics on CARs for finalist companies.

Event window	Number of observations	Number of firms	Mean CAR (%)	T1	T2	T3
(-10; 10)	63	26	1.613	1.467*	1.234	1.890**
(-5; 5)	63	26	2.238	2.581***	1.595*	1.638*
(-3; 3)	63	26	0.713	1.031	0.223	-0.378
(-10; -1)	63	26	1.394	2.388***	2.948***	3.150***
(-5; -1)	63	26	0.684	1.474*	1.435*	1.638*
(-3; -1)	63	26	0.159	0.284	0.965	0.378
(0; 10)	63	26	0.219	0.267	-0.275	0.378
(0; 5)	63	26	1.553	2.164**	1.337*	1.386*
(0; 3)	63	26	0.554	1.039	0.356	-0.630
(0; 1)	63	26	-0.133	-0.351	-0.669	0.882

\*, \*\*, \*\*\* denotes the statistical significance at 10, 5 and 1%, respectively (one-tailed test).

Hypothesis 1. This is confirmed by the fact that these investors reward firms that receive a merit or are finalists in an IR award competition without being winners.

We also investigated the persistence of the 'reward effect'. In other words, we tested whether shareholders react positively only the first time a company is winner or finalist in an IR award competition, or also on subsequent occasions. Our evidence shows positive and statistically significant results for companies announcing for the first time a good ranking in an IR award competition (Table 5, Panel A) in event windows that are symmetric and prior to the announcement date. Statistically significant estimations are found in fact in event windows (-5; 5), (-10; -1) and (-5; -1), with average CARs of 2.44, 1.63 and 0.78%, respectively. These results confirm that IR awards, even to first time winners, are probably easy for investors to forecast, or that some market participants have access to prior information. However, CARs relating to companies announcing that they are winners or finalists for the second, third or fourth time are statistically significant only in the event window (-10, -1), showing a

mean value of 1.21% (Table 5, Panel B). This means that shareholders consider the good quality disclosure provided by South African IR not only when a company gets a good ranking in a competition for the first time, but also on subsequent occasions, as suggested by Hypothesis 2 (Table 5) which shows the results of event studies conducted on the data for 76 cases of IR awards announced between 2013 and 2016. 28 announcements were made of first time awards to South African companies, and 48 of second, third or fourth time awards. We measured the company normal returns using the market model. The CAR statistical significance is assessed using three tests (T1, T2 and T3), reported in Equations 6, 7 and 9.

Furthermore, we tested whether the value attributed by shareholders to the quality of IR increased over time. For this reason, we subdivided our sample into two sub-samples: news announced 2013 to 2014 (35 observations) and 2015 to 2016 (41 observations). Focusing on the first period (Table 6, Panel A), we found positive and statistically significant average CARs of

**Table 5.** Test statistics on CARs for first and subsequent announcements.

Event window	Number of observations	Number of firms	Mean CAR (%)	T1	T2	T3
<b>Panel A: First announcements</b>						
(-10; 10)	28	28	1.512	1.037	0.899	0.756
(-5; 5)	28	28	2.436	2.011**	2.129**	1.512*
(-3; 3)	28	28	1.422	1.364*	1.279	0.378
(-10; -1)	28	28	1.630	1.719**	2.359**	2.646***
(-5; -1)	28	28	0.783	1.476*	2.331**	1.512*
(-3; -1)	28	28	0.369	0.674	1.943**	0.378
(0; 10)	28	28	-0.118	-0.115	-0.583	0.378
(0; 5)	28	28	1.653	1.500*	1.211	1.512*
(0; 3)	28	28	1.052	1.216	0.801	-0.378
(0; 1)	28	28	-0.062	-0.108	-0.877	0.378
<b>Panel B: Subsequent announcements</b>						
(-10; 10)	48	15	1.057	0.841	0.605	1.155
(-5; 5)	48	15	1.660	1.710**	0.531	0.289
(-3; 3)	48	15	0.362	0.463	-0.408	-0.577
(-10; -1)	48	15	1.205	1.859**	2.106**	1.732**
(-5; -1)	48	15	0.738	1.251	0.650	1.155
(-3; -1)	48	15	0.160	0.227	0.014	0.577
(0; 10)	48	15	-0.148	-0.158	-0.571	0.000
(0; 5)	48	15	0.922	1.243	0.226	0.289
(0; 3)	48	15	0.202	0.385	-0.318	0.000
(0; 1)	48	15	-0.002	-0.004	-0.955	0.289

\*, \*\*, \*\*\* denotes the statistical significance at 10, 5 and 1%, respectively (one-tailed test).

1.96, 0.71 and 1.27% in the event windows (-10; -1), (-5, -1) and (-10; 10), respectively.

This probably means that at the beginning, that is, when the practice of assigning IR awards started, market participants had access to information prior to their official announcement. In 2015 to 2016, awareness of IRQ had probably grown. The study results in fact show higher statistically significant CARs compared to the previous ones (Table 6, Panel B). Positive and statistically significant mean CARs of 2.21 and 3% are found in fact in the event windows (0; 5) and (-5; 5), respectively. This means that in the period 2015 to 2016, news about IR awards was not likely to spread before the official announcement.

Overall, higher significant CARs in this time span are estimated in symmetric event windows. This means that shareholders took into account the good quality disclosure provided by IR in their investment assessments increasingly over time. Overall, the analysis of the two subsamples appears to confirm our hypothesis that the greater the awareness of the quality of financial and non-financial disclosure provided by the integrated report, the greater the value attributed to it (Table 6). The table shows the results of event studies conducted on the

data for 76 cases of IR awards announced between 2013 and 2016. 20 news announcements were made in 2013, 15 in 2014, 19 in 2015 and 22 in 2016. We measured the company normal returns using the market model. The CAR statistical significance is assessed using three tests (T1, T2 and T3), reported in Equations 6, 7 and 9.

Finally, we conducted a cross-industry study. We subdivided the study sample into two sub-samples: news about financial companies (25 observations) and non-financial companies (51 observations). Only a few announcements related to financial companies are associated with statistically significant CARs (Table 7, Panel A). Specifically, only the event window (-10; -1) shows statistically significant average CARs of 1.26%.

The study results suggest that shareholders considered the good quality disclosure provided by financial company IR as important for their investment assessments between 2013 and 2016. However, in the case of IR award announcements, this positive market effect appears limited to the 10 days before the news is officially communicated to the market. This evidence seems to confirm that in financial companies, unlike other industries, IR report culture is probably not yet strongly developed and, therefore, the quality of IR disclosure is

**Table 6.** Test statistics on CARs for time period.

Event window	Number of observations	Number of firms	Mean CAR (%)	T1	T2	T3
<b>Panel A: 2013-2014</b>						
(-10; 10)	35	17	1.272	1.357*	1.483*	1.521*
(-5; 5)	35	17	0.710	1.077	0.897	0.845
(-3; 3)	35	17	0.715	1.046	1.007	-0.169
(-10; -1)	35	17	1.963	2.592***	3.539***	3.212***
(-5; -1)	35	17	0.710	1.398*	2.539***	1.521*
(-3; -1)	35	17	0.575	1.247	2.867***	1.183
(0; 10)	35	17	-0.691	-1.177	-0.681	-0.169
(0; 5)	35	17	0.000	0.000	-0.279	-0.507
(0; 3)	35	17	0.140	0.266	0.312	-0.169
(0; 1)	35	17	-0.082	-0.183	-0.260	0.507
<b>Panel B: 2015-2016</b>						
(-10; 10)	41	22	1.185	0.752	0.125	1.093
(-5; 5)	41	22	3.001	2.384**	1.292*	1.406*
(-3; 3)	41	22	0.784	0.798	-0.313	0.156
(-10; -1)	41	22	0.848	1.132	1.164	1.718**
(-5; -1)	41	22	0.793	1.244	0.316	1.718**
(-3; -1)	41	22	-0.051	-0.065	-0.247	0.781
(0; 10)	41	22	0.336	0.284	-0.467	-0.156
(0; 5)	41	22	2.208	2.132**	1.707**	2.655***
(0; 3)	41	22	0.836	1.154	-0.020	0.156
(0; 1)	41	22	0.025	0.051	-1.823	0.156

\*, \*\*, \*\*\* denotes the statistical significance at 10, 5 and 1%, respectively (one-tailed test).

not particularly appreciated by investors. However, we find many positive and statistically significant results for non-financial companies (Table 7, Panel B) in event windows that are symmetric (-5; 5), following (0; 5) and prior (-10; -1) and (-5; -1) to the announcement date. Higher estimations are found in the symmetric event window (-5; 5) with average CARs of 3.12%.

Event windows before the day 0 (-10; -1) and -5; -1 also show average CARs of 1.41 and 1.13%, respectively. Moreover, estimated mean CARs are positive and statistically significant at 1.99% for the event window (0; 5). As suggested by Hypothesis 4, these results seem to confirm that non-financial industries are often perceived as associated with stronger environmental impacts than the financial sector and IR report culture of non-financial companies is probably more developed than that of financial companies. For this reason, the quality of non-financial IR disclosure is strongly rewarded by shareholders (Table 7). The table shows the results of event studies conducted on the data for 76 cases of IR awards announced between 2013 and 2016. 25 announcements were related to financial companies, while 51 refer to firms from other industries. We measured the company normal returns using the market model. The CAR statistical significance is

assessed using three tests (T1, T2 and T3), reported in Equations 6, 7 and 9.

## Conclusions

IR is a new reporting paradigm that encourages companies to provide a concise, holistic account of company performance based on a “multiple capitals” approach that highlights the ability of an organization to create value over the short, medium and long term. However, we still know relatively little about the market impact of IR, and its real benefits for companies have not yet been sufficiently investigated.

In this context, the study aims to enrich the literature on the real value of IR. Specifically, we investigate whether shareholders, IR's main target audience, take into account the quality of disclosure provided by IR in their investment assessments, and reward outstanding firms. We used event study methodology to measure the stock price effect of IR award announcements. The component attributed to firm-specific events is typically referred to as the ‘abnormal return’. The study results indicate that high-quality disclosure, as proxied by IR awards, has a statistically significant relationship with abnormal returns

**Table 7.** Test statistics on CARs for industries.

Event window	Number of observations	Number of firms	Mean CAR (%)	T1	T2	T3
Panel A: Financial companies						
(-10; 10)	25	6	0.030	0.027	-0.097	1.000
(-5; 5)	25	6	-0.444	-0.538	-0.627	0.200
(-3; 3)	25	6	-0.416	-0.605	-0.367	1.400
(-10; -1)	25	6	1.264	1.829**	1.842**	1.800**
(-5; -1)	25	6	-0.017	-0.036	0.383	-0.600
(-3; -1)	25	6	0.082	0.186	0.703	1.800**
(0; 10)	25	6	-1.234	1.546*	1.331*	0.200
(0; 5)	25	6	-0.428	-0.605	-0.476	1.000
(0; 3)	25	6	-0.499	-0.836	-0.316	0.600
(0; 1)	25	6	-0.100	-0.239	-0.847	-0.200
Panel B: Other industries						
(-10; 10)	51	22	1.811	1.375*	1.346*	0.980
(-5; 5)	51	22	3.118	3.063***	2.612***	1.540*
(-3; 3)	51	22	1.326	1.537*	0.651	0.700
(-10; -1)	51	22	1.409	1.937**	2.424***	2.380**
(-5; -1)	51	22	1.133	1.966**	1.860**	1.820**
(-3; -1)	51	22	0.313	0.449	0.935	-0.420
(0; 10)	51	22	0.401	0.418	-0.032	-0.140
(0; 5)	51	22	1.985	2.373**	1.644*	2.100**
(0; 3)	51	22	1.013	1.655*	0.426	0.140
(0; 1)	51	22	0.014	0.029	-0.907	-0.700

\*, \*\*, \*\*\* denotes the statistical significance at 10, 5 and 1%, respectively (one-tailed test).

around the announcement date.

The effect on prices is particularly strong in the event windows prior to the date of the announcement and is nil in the following period. This probably means that many market participants have access to information before their official announcement. Specifically, the market does not seem to be particularly interested in who wins the award, but in those companies that follow best practice when drawing up their reports, even when they are only finalists.

In the event windows before, around and after the date of the announcement, average abnormal returns are very high for finalists. This means that being a candidate for an award seems to act as a signal for the market: it is not necessary to win, you just have to be nominated! This finding is consistent with previous studies, specifically with Lee and Yeo (2016) and PwC (2014) stating that “the effort required for delivering such high-quality reporting is worthwhile”. Moreover, the “reward effect” associated with companies providing IR good quality disclosure appears to be persistent. Not only companies announcing a good ranking in an IR award competition for the first time, but also those that are finalists or winners for the second, third or fourth time, experience in fact abnormal stock returns.

The study results also show that market appreciation of high-quality IR increased over the years, as suggested by Arguelles et al. (2015). This may be due to increased awareness among investors of the importance of IR (or rather the integrated thinking reflected in a well-prepared IR) and its added value. Share price increases were in fact slight during the period 2013 to 2014 and more substantial in 2015 to 2016. This implies that stakeholders probably need to develop their awareness and understanding of IR, how to use it and how it can add value. This consideration helps us to explain the next finding.

Indeed, the study final results show that the market appreciates high quality IR in all industries, although shareholder sensitivity is particularly high for non-financial companies. Traditionally, the financial sector has in fact been perceived as poorly connected to environmental impacts. For this reason, the IR report culture of non-financial companies may in fact be better developed than that of financial companies. The study highlights the importance of “pathway toward IR”, which requires the company publishes sustainability report (SR) for a preliminary period before beginning to approach IR. Such process in corporate reporting is actually more evident in non-financial companies than in financial

companies. This financial “delay” is described by the recent KPMG Corporate Responsibility Report (KPMG, 2017), which shows that the financial industry is in tenth place (among a total of 15 sectors) of the world ranking on corporate reporting.

The study findings thus appear to encourage managers to invest in the adoption of best practice for IR. High-quality disclosure generates a substantial positive reaction on the part of shareholders, and this is not a novelty effect as it does not fade in the first year following publication but in fact grows over time, becoming a source of value.

The positive effect of high-quality IR disclosure on share prices could be interpreted in the light of the information asymmetry between companies and investors and the enhanced reputation that comes from being recognized as practice leaders or credible disclosers. As suggested by Serafeim (2014), financial and non-financial information contained in good integrated reports probably helps to reduce information asymmetries and enables shareholders to make more efficient decisions.

According to the literature, better disclosure quality could in fact affect stock returns reducing stock liquidity risk and potential investors’ estimation of risk. Stock liquidity is increased and risk is reduced by good disclosure, either because transaction costs are reduced or because demand for the stocks rises, and as a result stock returns are lower than expected (Diamond and Verrecchia, 1991; Espinosa and Trombetta, 2007).

Furthermore, investors see an asset with low information as susceptible to greater systematic risk than an asset with high information (Barry and Brown, 1985; Coles et al., 1995; Clarkson et al., 1996). In the field of sustainability report studies, Guidry and Patten (2010) note that market reactions are considerably more positive for companies releasing high-quality reports than for those producing lower quality reports. This evidence confirms our conclusion that “quality matters”. A further justification of the results, that is, of the positive relationship between IR awards and stock prices, can be found in a resource-based view of the firm.

Barney (1991) affirms that companies which achieve and maintain a competitive advantage tend to be rewarded with a higher stock price. The rarity of resources that can give a competitive advantage, however, represents a serious obstacle, as the difficulty in replicating and substituting them. Such resources include intangibles like intellectual capital, organisational skills, corporate culture and reputation. IR awards and the consequent enhanced corporate reputation could be influential in this respect (Fombrun and Shanley, 1990; Hosmer, 1994; Saeidi et al., 2015).

IR is a new frontier of corporate reporting, and is a rich area for future research. More research is probably needed on the causes of identified relationship. We are aware that our research is limited by the fact that it

covers only four years and the size of the sample is not large, but this is a structural limit: the companies selected represent in fact the universe of companies meeting the sampling criteria. Moreover, IR has a short history, and the study provides a first quantitative insight into its benefits. It would be interesting to repeat the analysis in the future in order to confirm the positive reaction of share prices to IR awards, verify the growth over time of the impact in terms of abnormal returns, and establish whether some awards generate greater effects than others on the market and why this is so, for example, by looking at the composition of the jury that assigns the prize.

## CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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