Muddled Meanings - A Quantitative Content Analysis of Strategy Communications in FTSE 100 Annual Reports

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ABSTRACT

The paper discusses the results of a quantitative content analysis on strategy communications in FTSE 100 constituents' Annual Reports in 2010 and 2016. The analysis is based on categorization of n-grams containing the term "strategy" into contextual and non-contextual uses of the term. The analysis finds that a significant proportion of the uses of the term "strategy" are non-contextual, i.e. refer to matters other than the company's corporate or business strategy. The non-contextual uses include functional strategies as well as a broad range of other concepts. The non-contextual concepts most commonly associated with strategy are financial processes and corporate social responsibility. On average, the analysed companies had nine individual non-contextual "strategies". This "obfuscation" of strategy communication reduced somewhat between 2010 and 2016. Overt misuse of the term strategy and unclear strategy communication in a company's primary stakeholder communication vehicle can have negative consequences. Firstly, resource allocation, e.g. management time, may be skewed by multiple "strategies'. Secondly, strategy communication impacts investor perception of a company. Thirdly, poor understanding of the company's strategy by employees has a negative impact on the company's ability to execute. Companies should review their investor communication policies to ensure clarity of strategy communication for the benefit of investors, employees and other stakeholders.

Track 25: Strategy

Word Count: 4,452 (excl. tables and references)

1. Introduction

A good, clearly communicated strategy is critical for a company's long-term success (e.g. Rumelt, 2011). A poorly received strategy presentation by the CEO can have a substantial negative impact on a company's share price (Whittington et al., 2016, Schleicher et al., 2007). Despite of its importance, the very meaning of the word "strategy" has been muddled. Strategy has largely become a byword for "important" and is liberally sprinkled in corporate parlance (Mintzberg, 1978). In addition to the many corporate level strategies and strategic initiatives, companies have functional "strategies" for everything from R&D to raw-materials sourcing and distributor relations (Gluck et. al., 1980). However, strategy is not about operational effectiveness and must rest on unique activities (Porter, 1996). Therefore, it seems fair to ask that if a company has a "strategy" for a broad range of ordinary corporate activities, does is have a clear corporate strategy?

Companies use various media to communicate about their strategy, but for publicly listed companies in the UK, the annual report represents the most comprehensive systematic disclosure to shareholders (Athasanakou et al., 2014). This paper provides a detailed analysis on the use of the term "strategy" in the annual reports of large, sophisticated UK-listed companies. This paper looks into strategy communications in the annual reports of large, sophisticated UK companies using constituents of the FTSE 100 as a sample.

The analysis seeks to provide an answer to the question: what do companies mean when they talk about strategy?

2. Literature Review

A number of definitions of content analysis are available. Holsti (1968) says that it is any technique for making inferences by systematically and objectively identifying specified characteristics of messages. Kerlinger (1986) defined content analysis as a method of studying and analyzing communication in a systematic, objective, and quantitative manner for the purpose of measuring variables. Content analysis as a method has become increasingly important as the ever increasing volume of digital text provides social scientists a rich complement to the more structured kinds of data traditionally used in research, and "recent years have seen an explosion of empirical economics research using text as data" (Gentzkow et al. (2017).

Content analysis can be used to translate text into objective statistics or to analyse the deeper meaning of the content through subjective interpretation (Duriau et al., 2007, Erdener & Dunn, 1990). Further, longitudinal content research designs can be implemented because of the availability of comparable corporate information through time, such as annual reports (Jauch, Osborn, & Martin, 1980). According to Li (2012) the fundamental problem in content analysis of textual disclosure, such as annual reports, is data reduction – aggregating information in large amounts of text to manageable numeric variables. In many cases this reduction is done by counting tokens within the content: words, phrases, or other pre-defined features of text. (Gentzkow et al. 2017).

Content Analysis of Annual Reports

Annual reports are relevant to a broad audience of a firm's stakeholders and especially shareholders. The ability of the annual report to convey non-financial information is important. A recent survey found that the majority of institutional investors consider the annual report to be an essential of important sources of non-financial information when making an investment decision (Crossley, 2017).

Content analysis of annual reports has been used by researchers to understand several aspects of corporate priorities and behaviour. Beattie, Dhanani and Jones (2008) count the frequency of graphs in annual reports and categorise graphs by topic to assess trends in corporate communications. The researchers also noted that there has been a sharp increase in total page length, voluntary information and narrative information particularly among large listed companies' annual reports. Athanasakou & Hussainey (2014) used content analysis to investigate investor perception of the credibility of forward-looking performance disclosures (FLPDs) in the narrative sections of annual reports. Saunders & Tambe, 2012 used textual analysis of annual reports to understand firm-level adoption of technological innovation and IT-enabled business practices.

Cummins & Bawden (2010) used quantitative and qualitative content analyses of FTSE 100 annual reports to survey the way that companies present and value information and knowledge, concluding that information and knowledge are demonstrably important to FTSE 100 companies. Young and El-Haj (2014) conducted automated large-sample analysis into strategy-related content in 9,500 UK annual reports from 2003 to 2012, concluding that strategy-related content varies across industry and increases over time, and increases with firm size.

One aspect complicating content analysis is that the meaning of words may change depending on context. For example, Loughran and Macdonald (2011) found that words commonly used in financial context, such as "liability", have been misinterpreted in textual studies to incorrectly signify negative sentiment instead of neutral information. Further, annual report analysis has become more complex as corporate reports have been transformed to a colourful marketing and public relations document (Beattie et al. 2008). This development has also been noted by regulators, the SEC (2013) for example has raised a concern that annual reports are becoming less readable, and therefore less effective information sources to a company's stakeholders. Dyer et al. (2017) study supports this view by finding that 10-K disclosures over the period 1996-2013 exhibited market trends in term of increases in length, redundancy and decreases in specificity, readability, and the relative amount of hard information.

Another issue in textual content analysis of annual reports are small sample sizes. Jones and Shoemaker (1994) analysed 32 textual analysis studies and found that only two had a sample size over 100. Sample sizes, especially in the pre-Internet era, may have been limited because of the time and effort required and the complexity of annual report content. UK annual reports specifically have several characteristics that make them challenging for textual analysis, but also provide ample research opportunities. The reports follow a free style (no standard structure), use many images as well as text, are in PDF Format, content and structure varies across firms. Also the sheer volume of information in annual reports has been increasing. Beattie et al. (2008) found a sharp increase in total page length over time, voluntary information and narrative information among large listed companies. In addition, management have more discretion over what, where, and how much information on topics such as risk, strategy, performance, etc. is reported (Rayson and E-Haj (2014).

Textual Analysis and Financial Performance

Finance and accounting research has a long history of utilizing textual disclosures (e.g. Cole and Jones, 2005). “Understanding the textual information in corporate disclosures is important for financial accounting research … textual information can provide a very useful context for understanding financial data” (Li, 2012). However, more qualitative narratives have not been researched to the same extent as financial statements in assessing firm performance and behaviour. (e.g. Abrahamson & Amir, 1996). Increased focus on the narrative is a welcome development, as singular focus on accounting methods largely ignores the wider influences of the annual report document (Hopwood, 1996).

Researchers have found several links between annual report narratives and financial performance. For example, Buehlmaier and Whited (2017) used textual analysis of annual reports to construct novel measures of financial constraints and investigate their impact on stock returns. Schleicher et al. (2007) showed that the share price of loss-making firms that provide a large number of earnings predictions in annual report narratives effectively anticipated next period’s earnings predictions. Li (2006b) measured the risk sentiment of annual reports (10-K filings) by counting the frequency of words related to risk or uncertainty, and found that an increase in risk sentiment is associated with lower future earnings.

Strategy Communication as a Performance Driver

How companies talk about their business, including strategy, can have a significant impact on firm performance and market perception. “Reporting, if done well, can deliver competitive advantage in a variety of ways. It can help secure capital and credit, win the war for talent, and build strong business relationships” (PricewaterhouseCoopers, 2009).

The root cause for unclear strategy and bad strategy communication often lies with top management. Connecting strategy and action is sometimes hard, even at the top. Sull et al. (2015) surveyed corporate management teams to find that not only are strategic objectives poorly understood, but they often seem unrelated to one another and disconnected from the overall strategy. Just over half of the surveyed top team members say they have a clear sense of how major priorities and initiatives fit together. Unclear strategy communication also impacts investors’ perception of a company and its management. Girsky (2014) recalls advice to corporate executives on how to enhance their relationship with investors: “Don’t make it so hard for people to discern your narrative. Communicate a clear and consistent story, and offer data points over time that demonstrate progress toward your vision”.

Investor Perception

The relationship between communication about a company’s strategy and investor perception and reactions has been established in several studies. Feldman et al. (2008) found that the tone of the management discussion and analysis section in annual (10-K) reports significantly affect market reactions immediately after publication of the report. Amel-Zadeh and Faasse (2016) found that find that investors’ reaction to textual characteristics of the management discussion is much stronger and timelier than their reaction to textual characteristics of the notes to the financial statements. Mayew et al. (2012) find that both management’s opinion about going concern and textual features of management discussion disclosures together provide significant explanatory power in predicting whether a firm will cease as a going concern. Moreover, the predictive ability of the management discussion disclosure is incremental to financial ratios.

Saundres and Tambe (2012) found that the market value of companies rose to above industry average after the introduction of data-related keywords to a company's 10-K filing, taken by investors as a signal of forward-thinking. Abrahamson & Amir (1996) found that future performance of a firm can be partially predicted using content analysis of its President's letters in the annual report. Overall, unclear or complex strategy communication, among other disclosures, increases investors' information processing costs (Grossman and Stiglitz, 1980). Li (2006a) suggests that this transaction cost inflation may be partially willful: "managers may be opportunistically choosing (to influence) the readability of annual reports to hide adverse information from investors"

Strategy Execution

A clear strategy enables efficient and effective resource allocation, and clear communication of the strategy enables the organization to align on priorities and thus supports effective strategy execution. "It's a challenge that confronts every company: how do you give employees clear strategic direction but also inspire flexibility and risk taking?" (Gadiesh and Gilbert (2001). Business leaders naturally want their company's strategy to be understood and accepted by employees— "embedded." This helps ensure that workers' daily decisions and behaviors support the firm's competitive intentions. The primary factor in how well employees understand and support strategy are actions and communication by the top management (Galunick and Hermreck 2012).

Unclear internal strategy communication is unlikely to be intentional in most cases, but may simply stem from asymmetric information between management and the workforce. As Heath and Heath (2006) note: "top executives have had years of immersion in the logic and conventions of business, so when they speak abstractly, they are simply summarizing the wealth of concrete data in their heads. But frontline employees, who aren't privy to the underlying meaning, hear only opaque phrases. As a result, the strategies being touted don't stick".

The Strategic Report

The UK Government (Companies Act 2006) set a requirement for all non-exempt UK companies to include a Strategic Report as part of their annual report, effective from 1st October 2013. The objective of the strategic report is to give shareholders and other stakeholders enough information to understand a company's performance and future prospects, with further detail in the rest of the annual report. The strategic report should be balanced, comprehensive and understandable to get key messages across to readers (Moore Stephens 2014). According to the Financial Reporting Council, FRC (2014) the strategic report could be the ideal shop-window for a business. It offers companies the chance to "experiment and be innovative in the drafting of their annual reports … in a way that enables them to best tell their story". This includes "a holistic and meaningful picture of an entity's business model and strategy".

What impact the requirement has had on annual reports is unclear. The regulation has likely encouraged less open companies to increase communication about their strategy, but may have had limited impact on more active communicators. Bini et al. (2011) for example found that the most profitable companies voluntarily communicate plentiful profitability indicator data in their annual reports, independent of any legal requirement. Less profitable companies, on the other hand, might be induced to massage their disclosure, presenting useless or doctored ratios. Other researchers have found that introduction of a regulatory reporting requirements improved annual report disclosures by increasing the quantity of disclosure and reducing boilerplate (Lang and Lawrence, 2015). Such increased clarity would be a desirable result of the Strategic Report, as the Accounting Standards Board (2009) found in a review of 50 UK listed companies' annual reports a tendency to clutter annual reports though over-use of certain key terms, such as "Risk" to the extent that one analysed company listed 33 different risks.

The FRC has since published Guidance on the Strategic Report, revised multiple times. These revisions encourage companies to report on broader matters that may impact the value and sustainability of business over the longer term. For example:—the entity's purpose and the impact of the entity's activities on society more widely (Deloitte (2017). Overall, I hypothesise that the requirement for a Strategic Report has had a material impact on the quantity and quality of strategy communication in UK annual reports.

3. Propositions

I test three propositions trough textual data in FTSE 100 annual reports in the years 2010 and 2016.

Proposition 1: the volume of strategy communication has increased over the period in absolute terms and after controlling for the increased length of annual reports

Proposition 2: the term strategy is frequently used out of context, typically to signify importance. The share of this non-contextual use has changed over the analysis period due to the introduction of the Strategic Report

Proposition 3: shifts in corporate priorities can be detected by measuring the relative share of non-contextual association of "strategy" by category over time

4. Methodology

The study is based on a longitudinal content analysis of FTSE 100 annual reports in 2010 and 2017. While there are at least three disclosure characteristics of interest in textual content: the amount of disclosure, the tone, and the transparency (Li, 2010), this analysis is based on straightforward word counts of the term "strategy" in PDF versions of the annual reports, combined with a word association analysis to identify n-grams which associate strategy with contextual and non-contextual concepts.

The sample was selected to provide a way to assess how large, sophisticated, well-regulated companies communicate about strategy in their main stakeholder communication vehicle, the Annual Report. The analysis is based on the view that UK firms have considerable discretion regarding both the content of their annual report narratives and the format in which these narratives are presented which vary significantly, especially in relation to communication about the firm's strategy and business model (Athanasiou et al., 2014).

Research shows that textual disclosures in annual reports over time are informative in terms of both company fundamentals and market reactions (e.g. Li, 2011). However, this paper does not attempt to correlate the use of the word strategy, whether contextual or non-contextual, with management actions or firm performance. These are subjects for further studies

Use of n-grams to Determine Corporate Topics of Interest

The interpretative part of the study relies on the use of n-grams to identify the wide variety of contexts that strategy is associated with. Gentzkow et al. (2017) note that n-grams can be used to encode a limited amount of dependence by counting unique phrases rather than unique words. A phrase of length n is referred to as an n-gram. For example, "Procurement Strategy" [procurement:strategy] is a 2-gram (or "bigram") representing non-contextual use of the term "strategy". While procurement is an important corporate function, it is not the company's strategy. In analysis of partisan speech, for example, single words are often insufficient to capture the patterns of interest: "death tax" and "tax break" are phrases with strong partisan overtones that are not evident if we look at the single words "death," "tax," and "break" (Gentzkow and Shapiro, 2010)

This study uses strategy-related n-grams to identify topics of interest at corporate level based on the view that association with the term "strategy' means that a certain topic is of significant interest to management. Simply, if strategy is frequently used as a synonym for important (Mintzberg, 1978), then concepts associated with strategy in an n-gram are a proxy for what management considers important.

Manual vs. Automated Content Analysis

This study is based on manual categorization of approximately 14,000 data points according to their context. I believe this approach has added depth into my understanding of corporate communications on strategy. The manual approach has in my view been necessary to gain managerial insights from the unstructured data set that is FTSE 100 annual reports. Nevertheless, the manual approach has several disadvantages such as high cost in terms of time commitment and some subjectivity of the analysis (e.g. Li, 2010). As a principle, content analyses should be based on automated algorithms to enable large samples, efficiency, and objectivity.

Algorithms are commonly used for large scale extraction of textual information embedded within financial reports (e.g. Hering, 2016). Specific software tools have been developed to analyse large samples of heterogeneous narrative content in UK annual reports (e.g. Young and El-Haj 2014, Alves et al. 2016). Further spread in the use of these tools and techniques should enable the practical use of content analysis in further strategic contexts, such as competitor analysis, identification of cross-industry trends in innovation or the deployment of digital technologies.

Sample and Data

The sample consists of 95 companies that were constituents of the FTSE 100 Index in June 2016 and have consistent annual reports available in PDF format for the 2010-17 period. The methodology does not require the companies to have been constituents of the index throughout the period.

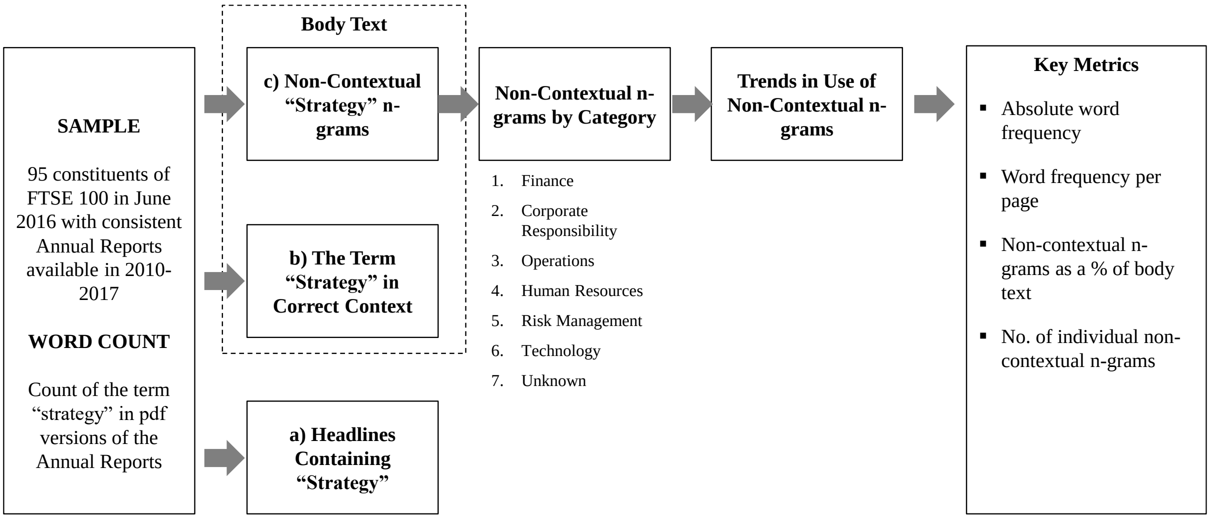
The timeframe was chosen represent a business cycle from the aftermath of the global financial crisis to renewed global growth. The timeframe also accounts for the introduction of The Companies Act 2006 on Strategic Report Disclosure Requirement that has since 2013 required large UK companies to include a Strategic Report section in their Annual Report and to follow a set of Financial Reporting Council guidelines for the report (FRC 2018). FTSE 100 companies were chosen to represent companies with sophisticated strategy communications. E.g. The Accounting Standards Board (2007) found that FTSE 100 companies on average do include a higher quality discussion of their strategy in the annual report than non-FTSE 100 UK companies.

The analysis is based on straightforward word frequency counting. First, by counting the number of times the word “strategy” appears in an annual report by using automated search and word count function. Secondly, considerable time and effort was expended to analyse the context for each of the approximately 15,000 occurrences of the word strategy. The words were manually sorted into three categories:

a) Headlines or tables of content that do not contain information or meaning in themselves

b) Contextual use of the term “strategy” to describe the company’s actual corporate or business strategy, e.g. “The Company’s strategy is…”

c) Non-contextual use of the term “strategy” in an n-gram ([n], strategy) where the term is associated with concepts or activities that do not relate to the company’s actual strategy. For example, Talent Strategy, Audit Strategy, Corporate Social Responsibility Strategy



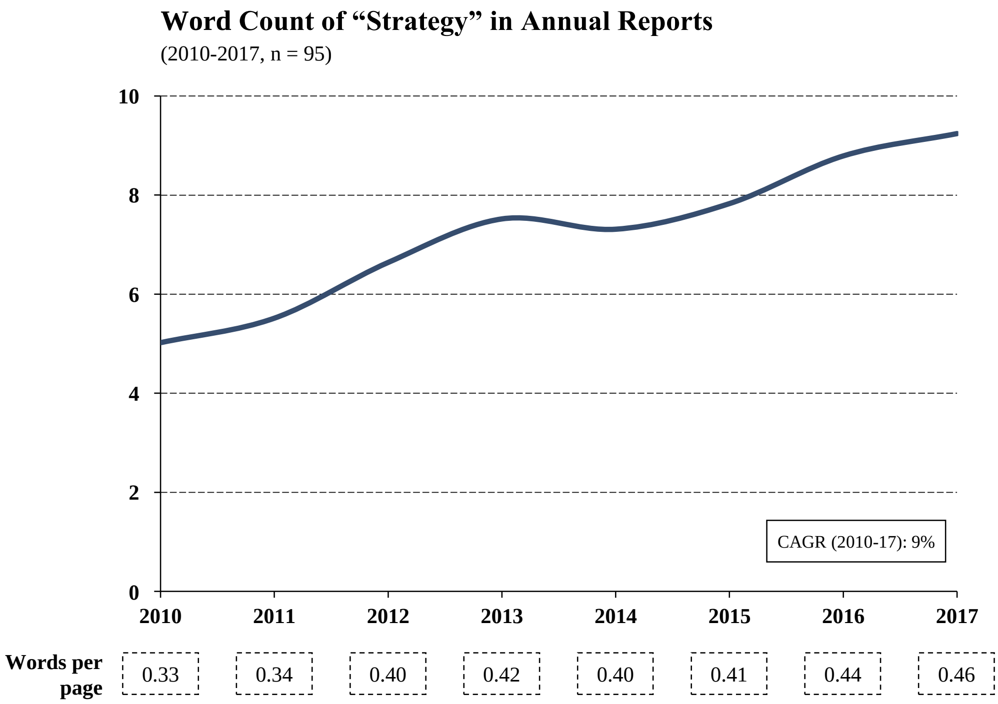
Picture 1. Overview of Methodology

The focus of analysis is on categories (b) and (c), i.e. use of the term "strategy" in the body text of the reports. Words in category (b) are counted over time. Words in category (c) were further categorized into seven sub-categories, depending on their context. The categories are Finance, Corporate Responsibility, Operations, Human Resources, Risk Management, Technology, and Unknown where the context could not be determined.

Appendix 1 presents examples of the word categorization and Appendix 2 a sample of the final word dataset.

5. Results

The 95 companies in the sample increased their use of the term "strategy" by 9% annually between 2010 and 2017. The growth is significant even when accounting for the increased length of annual reports over the period – "strategy" count per page increased from 0.33 to 0.46, a 5% annual increase.



Picture 2. Word Count of "Strategy" in FTSE 100 Annual Reports

Approximately a quarter of the "strategy" terms in the annual reports' body text are non-contextual (28% in 2010 and 23% in 2016). In addition, there were a significant number of companies using the term non-contextually more than a third of the time in their annual report body text. The proportion of such companies reduced from 23% to 16% between 2010 and 2016.

Table 1. Summary Statistics

FTSE 100 Annual Reports	Frequency						Percent of Total	
	Total Words			Words per Page			Total Words	
Sample n = 95	**2010**	**2016**	**CAGR**	**2010**	**2016**	**CAGR**	**2010**	**2016**
Total pages	15,556	19,788	4%	n.m.	n.m.			
Frequency of "Strategy"	5,172	8,799	9%	0.33	0.44	5%	100%	100%
All "Strategy" Terms								
a) Headlines	1,832	2,368	4%	0.12	0.12	0%	35%	27%
b) Fully Contextual	2,420	4,955	13%	0.16	0.25	8%	47%	56%
c) Non-Contextual n-grams	920	1,476	8%	0.06	0.07	4%	18%	17%
"Strategy" in Body Text Only								
Non-Contextual n-grams as a % of Body Text	**28%**	**23%**						
% of companies with 1/3 or more of Body Text Strategy Terms Non-Contextual	**23%**	**16%**						
Individual Non-Contextual n-grams	**215**	**293**	5%					

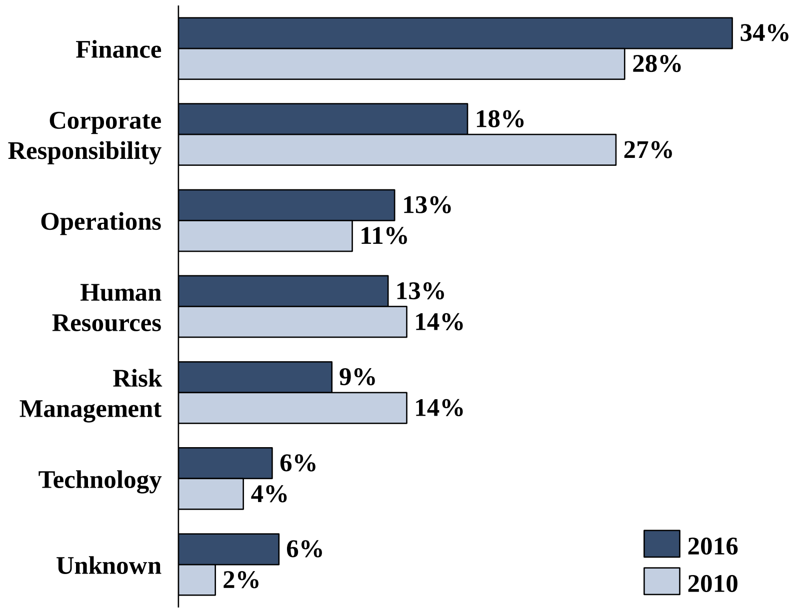
In 2016, the analysed companies had a total of 293 different ways of saying "strategy", when not actually talking about their strategy. These non-contextual strategy n-grams represent a broad range of terms. The Top 3 most frequent n-grams in 2016 referred to financial processes (Investment Strategy, Audit Strategy, Tax Strategy), whereas in 2010 the Top 3 were more diversified (Investment Strategy, Risk Management Strategy, Corporate Responsibility Strategy).

Picture 3. Non-contextual "Strategy" n-grams in body text in 2016

Table 2. Top 10 Non-Contextual n-grams

	2010		2016	
Rank	**Count**	**Term**	**Count**	**Term**
1	143	investment	109	investment
2	114	audit	78	corporate responsibility
3	87	tax	74	risk management
4	80	risk	62	remuneration
5	61	sustainability	40	risk
6	58	people	30	hedging
7	49	remuneration	19	technology
8	44	risk management	18	people
9	41	hedging	16	financial
10	32	funding	15	funding

Finance was the most frequent non-contextual category both in 2016 and 2010. In 2010 Corporate Responsibility attracted 9 percentage points more non-contextual n-grams than in 2016. Categories such as Operations and Human Resources remained relatively stable over the period.



Picture 4. Non-contextual “Strategy” n-grams by Category

Risk Management-related n-grams saw a 5 percentage point reduction. Use of non-contextual Technology-related n-grams increased by 50%.

6. Discussion

Reflecting on the three propositions, I draw preliminary conclusions on strategy communication in corporate annual reports.

Firstly, the sampled FTSE 100 companies have substantially increased the volume of strategy communication in their annual reports between 2010 and 2017. This increase has been both absolute (number of words) and relative (words per page). The absolute increase of 9% per year appears significant, and is more than double the rate of growth in length of annual reports as measured by number of pages. The main factor behind this increase in strategy communication is likely the requirement for non-exempt UK companies to include a Strategic Report in their annual report. Another factor appears to be the overall increase in length of annual reports, from average of 164 pages in 2010 to 208 pages in 2016. As the increase is driven by a regulatory requirement one should not necessary interpret it as greater focus on strategy by the companies. Nevertheless, as the volume of strategy communication increases, clarity and purposefulness become increasingly important.

Secondly, the term “strategy” is widely associated with concepts other than a firm’s corporate or business strategy. Over the period, an average of 25% of strategy terms in the annual reports’ body text were non-contextual. The share of non-contextual use of the term declined somewhat from 28% of body text in 2010 to 23% in 2016. The number of individual non-contextual terms associated with strategy increased from 215 in 2010 to 293 in 2016. In other words, in 2016 the companies had 293 ways of saying “strategy”, when not actually talking about their strategy. Both the relative share and absolute number of non-contextual n-grams indicate a significant dilution of the meaning of strategy. The most prolific out-of-context user of the term had 24 individual strategies in 2016. This level of obfuscation is likely to negatively impact stakeholders’ perception of the clarity of company’s strategy.

Finally, if the use of the term “strategy” in conjunction with a corporate activity implies importance, we can draw preliminary conclusions on corporate priorities. The two main changes related to Finance and Corporate Responsibility (CR). Finance related n-grams have gained ground while the share of Corporate Responsibility related n-grams has declined. This could be interpreted as a sign of relative decline in management focus on CR. The use of Technology-related strategy n-grams grew by 50%, albeit from a low base. Use of Risk n-grams reduced significantly. Other content categories have remained relatively stable.

While we should not attempt to draw firm conclusions from the simplified analysis, it appears fair to say that companies do reflect their priorities though the use of strategy n-grams. Finance is clearly a key topic on the corporate agenda. CR has become a feature in corporate communications and attracts management attention, but the topic may be maturing. Technology clearly is an increasingly important topic in all industries so the increase in usage of related strategy n-grams is not surprising. Higher focus on Risk immediately after the last financial crisis and subsequent decline since makes intuitive sense.

In summary, If a company has twenty four ‘strategies’, does it have a clear strategy? Even if the top management is clear on corporate priorities, are employees in a position to make sense of multiple strategies? Based on the findings, it seems reasonable to recommend that managements review their communication “strategies” and seek to reduce overt misuse of “strategy”.

7. Questions for Further Research

This simple study raises two main questions for further research. Firstly, how does the coherence of strategy communication in annual reports impact firm performance over time? Investor perception of a company's investor presentations impacts a company's share price in the days following the event. Do annual reports have a similar, long-term impact on investor perception? Which factors influence clarity of strategy communication in annual reports? For example, does the appointment of a strategy director into the executive committee have an impact on the quality of strategy communication?

Secondly, what is the impact of obfuscation in strategy communications on a company's resource allocation and employees' ability to understand, and ultimately execute, the company's strategy? Mintzberg (1978) defined strategy as a "pattern in a stream of decisions". These decisions should in turn translate into a stream of actions. How will having multiple "strategies", as in priorities, affect a company's resource allocation especially in terms of human resources and management attention? Does having ten strategies impact employees' understanding of a company's priorities and ability to make the daily decisions that ultimately govern what gets done within an organization?

In addition, one could ask what other ways content analysis of unstructured textual information could be used to understand corporate strategy and actions over time.

Appendix 1. Examples of word categorization

a) Headlines with no information content

b) Non-contextual use of the term "strategy"

c) Contextual use of the term "strategy"

Appendix 2. Sample of the word data

			Word Frequency 2016			Pages	Words per Page	"Strategy" Word Count											"Strategy" in body text only (b+c)					
No.	Company	Sector	Strategy	Innovation	Digital	2016	Strategy	Headline / Title [a]	Out of Context [b]	Fully Contextual [c]	Total [d]	Headline / Title [a]	Out of Context [b]	Fully Contextual [c]	Total [d]	Headline per page	Out of context per page	Contxtual per page	Total	Total body text per page	% non-contextual	% fully contextual	Non-contextual per page	Fully contextual per page
1	3I GRP.	Financial Services	60	0	2	**168**	**0.36**	4	7	49	60	7%	12%	**82%**	100%	0.02	0.04	0.29	56	0.33	13%	**88%**	0.04	0.29
2	A.B.FOOD	Consumer Goods	46	21	3	**170**	**0.27**	14	5	27	46	30%	11%	**59%**	100%	0.08	0.03	0.16	32	0.19	16%	**84%**	0.03	0.16
3	ADMIRAL GRP	Financial Services	44	1	2	**148**	**0.30**	9	10	25	44	20%	23%	**57%**	100%	0.06	0.07	0.17	35	0.24	29%	**71%**	0.07	0.17
4	ANGLO AMERICAN	Energy & Resources	56	21	0	**206**	**0.27**	8	9	39	56	14%	16%	**70%**	100%	0.04	0.04	0.19	48	0.23	19%	**81%**	0.04	0.19
5	ANTOFAGASTA	Energy & Resources	189	18	0	**208**	**0.91**	121	24	44	189	64%	13%	**23%**	100%	0.58	0.12	0.21	68	0.33	35%	**65%**	0.12	0.21
6	ASHTEAD GRP.	Support Services	52	1	0	**128**	**0.41**	15	4	33	52	29%	8%	**63%**	100%	0.12	0.03	0.26	37	0.29	11%	**89%**	0.03	0.26
7	ASTRAZENECA	Life Sciences	145	35	1	**248**	**0.58**	93	20	32	145	64%	14%	**22%**	100%	0.38	0.08	0.13	52	0.21	38%	**62%**	0.08	0.13
8	AVIVA	Financial Services	306	14	291	**362**	**0.85**	153	45	108	306	50%	15%	**35%**	100%	0.42	0.12	0.30	153	0.42	29%	**71%**	0.12	0.30
9	BABCOCK INTL	Support Services	85	18	4	**216**	**0.39**	16	10	59	85	19%	12%	**69%**	100%	0.07	0.05	0.27	69	0.32	14%	**86%**	0.05	0.27
10	BAE SYS.	Industrials	76	7	11	**192**	**0.40**	24	15	37	76	32%	20%	**49%**	100%	0.13	0.08	0.19	52	0.27	29%	**71%**	0.08	0.19

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