No risk, no fun: implications for positioning of online casinos

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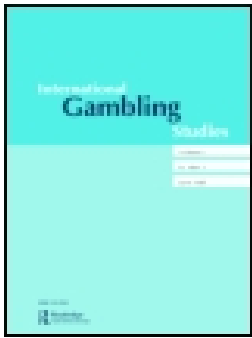Luleå University of Technology
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ABSTRACT

This study uses textual content analysis of online casinos to provide insights into how operators position themselves in the market. Qualitative data from the About Us pages of 19 online gambling websites is gathered and analysed using DICTION software. The resulting z-scores are further analysed using the Hierarchical Clustering on Principal Components (HCPC) function in the *FactoMineR* software package. Results indicate that the casinos investigated group into three distinct and meaningful clusters (activity/realism; low certainty; high certainty). The results confirm that this exploratory methodology, which combines computerized lexical analysis using DICTION and HCPC, is able to identify positioning differences. In addition, the presence of a relationship between identified clusters and casino rankings is also considered. Its confirmation suggests that casinos that emphasize risk (low certainty) are more likely to obtain higher rankings. The Web has provided a platform for a global online gambling industry where differentiation and positioning is crucial. Therefore, managers need to emphasize in their online and offline communication the often-held perception that one of the attractions of gambling is the thrill or excitement of beating the odds. Limitations are noted and possible areas for further research are indicated.

Introduction

The Internet and digital media are having a significant effect on businesses' operations and communications at both a corporate and a marketing level. The development of the Internet from Web 1.0 to Web 2.0 has provided a platform that businesses can embrace (O'Reilly, 2005). Online casinos have leveraged the operational possibilities that the Internet has provided and today they have a global reach. With global Internet penetration as a percentage of world population at 49.2% (Internet World Stats, 2016), online gambling business continues to exhibit steady annual growth and is also expanding into emerging markets and economies. Indeed, it has become a global industry, growing at 11% annually that is worth an estimated $37 billion, with the European market estimated at around $15 billion (Cardplayer.com, 2016). This means that the global online gambling market is dominated by Europe with the largest market share estimated by the European Gaming & Betting

Association (2016) at 48%. There are a myriad of online casinos and gambling websites available to players. A quick look at the Casino City (2016a) website suggests that there are now over 3650 online gambling websites. Customers are virtually spoilt for choice, and with a lot of the websites also being accessible via mobile devices, a world of gambling is literally at their fingertips.

However, the Internet goes beyond operational capabilities and plays an important role in both corporate and marketing communications. Online casinos overwhelmingly employ a corporate branding approach that requires particular sensitivity to positioning. This is especially so for companies which operate with different brands in the same geographical market. Indeed, if a company does not use its corporate and marketing communications to do so, its customers will still position the casino brand according to what they believe and how they interpret the messages that are being transmitted by the website.

Despite the significant size of the market and its importance, little attention has been devoted to the corporate and marketing communication side of online casinos. Studies on gambling are overwhelmingly from the field of psychology and focus on aspects of gambling behaviour, particularly problem gambling (Auer & Griffiths, 2013; Gainsbury, Parke, & Suhonen, 2013; Gainsbury, Suhonen, & Saastamoinen, 2014; Griffiths, 2013; Philander & MacKay, 2014; Rousseau & Venter, 2002; Sutton & Griffiths, 2007; Wardle, Moody, Griffiths, Orford, & Volberg, 2011) and suggested regulatory measures (Buil, Moratilla, & Ruiz, 2015; Gainsbury et al., 2013; Leneuf, 2011; McAllister, 2014; Rose & Owens, 2009; Srikanth & Mattamana, 2011).

This article sets out to explore the market from a communication and marketing perspective and investigates whether online casinos are differentiating themselves, and the basis of any such differentiation. Text is scraped from the About Us sections of a sample of 19 English-language online gambling websites, operating in European countries. The scraped text is first content analysed using the lexical software DICTION and the resulting z-scores obtained are then used in additional analysis using Hierarchical Clustering on Principal Components (HCPC). Specifically, lexical analysis is undertaken of the content that online casinos display on their websites to describe themselves to potential customers. Additionally, the article investigates whether distinct clusters can be identified and explores the relationship between resulting clusters and the online rankings of online casinos. Results are reported, implications are discussed, limitations are noted and possible areas for further research are indicated.

A changing Internet context

Corporate and marketing communication is being significantly impacted by the new digital media technologies. Although these technologies have been around for some time, many of the early websites on what was termed Web 1.0 were static and mostly about providing information and in some cases promoting purchases or e-commerce. Indeed, a lot of the content and information provided by such sites came about when these firms converted their various printed communications and marketing material onto the Internet, earning the title of 'brochureware' (Carr, 2010). Such static websites are dead today.

Nowadays, customers' interaction with the World Wide Web is much more dynamic and diverse. The Internet is omnipresent and accessible via different devices, ranging from desktop computers to mobile phones and even smart watches. Rather than just being a platform

on which one-to-many communication was prevalent, the Internet today has become a platform that provides a 'playground' for everyone, where many-to-many communication has become the norm. Indeed, Web 2.0 is the Internet 'now' as against the Internet 'then'.

Tim O'Reilly (2006), who coined the term Web 2.0, describes it online as

> the business revolution in the computer industry caused by the move to the Internet as a platform, and an attempt to understand the rules for success on that new platform. Chief among those rules is this: Build applications that harness network effects to get better the more people use them.

With Web 2.0 the Internet is therefore primarily a platform that enhances and makes possible 'a series of application progressions, rather than something new in itself' (Berthon, Pitt, Plangger, & Shapiro, 2012, p. 263). Essentially, the Internet has made it possible for much more to happen online. Instead of being static, websites today are connected to databases that store personal (customer) information, and curate content generated by both the owner of the website and visitors. The playground magic lies in the constant communication between the front- and back-end that facilitates dynamic content visualization, co-creation and information provision.

As a playground platform, Web 2.0 has not only made the rise of social media possible, such as Facebook and Twitter, but has also fostered the rapid development of online gambling. However, notwithstanding these developments, marketing and communication managers have struggled to understand the disruptive phenomenon that is the Internet and to develop meaningful business models to monetize and leverage website visits via the opportunities provided by new tools such as AdSense and Ad Exchange. Online gambling companies are no exception. Differentiation among online gambling firms becomes imperative if they are to stand out from the crowd and become visible and recognizable (Hendy, 2015). The next section therefore considers online casinos and the challenge of positioning their brands in the online gambling market.

Online casinos and positioning

The Internet, as a facilitator, has made it possible for new business models to thrive. There is no doubt that online gambling has been a major beneficiary as firms set up online casino websites, allowing customers to play from virtually anywhere at any time of the day. One aspect of the disruptive nature of the Internet is evident in that it has provided a platform that has allowed casinos to set up online gambling opportunities that players can access readily, even overcoming otherwise strict legal control on gambling in their home country. This has helped in no small way in facilitating the industry growth and it having become a global industry.

Casino, betting and poker are the main products on offer and together account for over 70% of the revenue of online casinos. In this highly competitive market, operators fight for market share and customer loyalty by offering signup and loyalty bonuses, free spins or free bets, bonus credits and other promotional activities, including raffles that range from (short) trips to sports events, participation in live casino and/or poker tournaments to merchandise/apparel (Gainsbury, 2012; Gainsbury et al., 2013). Knowing how to 'keep customers happy' effectively is vital to success. Yet, despite its importance, online gambling has attracted little research interest from a corporate and marketing communication perspective.

One of the major challenges of any business relates to how it wishes to position and differentiate itself and its offerings in the market. Indeed, if a company does not use its

marketing activities, particularly marketing communications, to do so, customers will still position the firm according to what they believe and how they interpret the messages that are being transmitted by the firm. A cursory look at the websites of online casinos shows the widespread use of umbrella or corporate branding where the positioning sought is for the overall company brand.

The 1986 book by two advertising practitioners, Al Ries and Jack Trout, titled *Positioning: The Battle for Your Mind*, remains, to this day, an important reference point on positioning. The authors argued that positioning is not something you do to a product; rather, 'you position the product in the mind of the prospect' (Ries & Trout, 1986, p. 2). Online activity and browsing behaviour expose customers to a myriad of communications and finding the proverbial window to the mind of prospects, and being first to occupy that space, is indeed challenging. Many online gambling websites struggle to differentiate themselves significantly from their competitors, and often this is reflected in poor Search Engine Optimization (SEO) strategies (Hendy, 2015).

Some limited online casino brand differentiation can be achieved via the restricted number of software providers that determine the range, type and quality of the games available and by the operating license(s) that the online casino has acquired. Thus, while licenses from the UK, Gibraltar and Malta are favoured, gamblers are advised by fellow players to avoid casinos that are licensed in the Caribbean (Casinomeister.com, 2016b). Indeed, numerous ranking websites and forums categorize and/or position online casinos according to the magnitude and quality of games offered and their providers, payment methods available, speed and ease of making money transactions, and jurisdictions in which the casinos are licensed, as well as language and currencies offered (Casino Listings, 2016; Casinomeister.com, 2016a, 2016b).

However, more often than not, companies sponsor these forums and affiliate websites in return for providing traffic. Furthermore, the exact criteria for rankings are not always explained or otherwise obvious to the reader, making a comparison of online casinos on the basis of ranking websites arduous. A more accurate result of the positioning achieved by online casinos can be better attained with a judicious analysis of what online Casinos say about themselves.

Research focus

This article therefore sets out to investigate how online casinos present themselves via the text content of their websites to communicate positioning differences to their customers. Specifically, the study asks:

> RQ1: Can lexical analysis of text content from websites of online casinos be used in clustering to identify positioning differences?

> RQ2: Is there any correspondence between identified clusters and the web rankings of online casinos?

Methodology

The methodology employed in investigating the research questions in this study is primarily exploratory. Data from the About Us section on the websites of 19 online casinos

were collected. The investigation uses DICTION v7 software for lexical analysis followed by Hierarchical Clustering on Principal Components (HCPC) analysis via the *FactoMineR* facility in the *R* software version 3.2.4. Finally, a one-way ANOVA, using IBM's SPSS version 21, is employed to investigate whether identified clusters can differentiate among casino rankings.

Sample

Based on reviews and rankings obtained from the Casinomeister website, a purposeful sample of online casinos was chosen. As Europe was the focus of the study, all casinos chosen needed to be operating in Europe and licensed under at least one recognized gambling jurisdiction. Casinomeister was chosen as the primary source for sample selection because of its strict policy on transparency and trust (Casinomeister.com, 2016c). It provides a detailed account of the criteria adopted for its published rankings of online casinos (Casinomeister.com, 2016a) and both players and the casino industry value the Casinomeister forum and its annual casino awards. The website encourages official representatives of online casinos to register on its forum, thereby facilitating a useful channel for B2C communication that can resolve player complaints and allows online casinos to promote themselves with exclusive offers to customers. Many of the forum threads are visible to both registered and non-registered visitors, making it possible for players to read entries, follow discussions and observe how a complaint was handled and whether it was resolved. Indeed, Casinomeister, via its founder Brian Bailey, has recently become a certified arbitrator in the EU (Casinomeister.com, 2016d; CIArb.org, 2016) and is awaiting approval by the UK Gambling Commission to become an official Alternative Dispute Resolution (ADR) entity (Gambling Commission, 2016).

In order to ensure the credibility and appropriateness of the chosen 19 online casinos in the sample, their reputation amongst players was cross-checked by consulting the websites AskGamblers.com and Casino City that also provide rankings for online casinos. Although these two sites do not provide complete information as to how the rankings they provide are arrived at, both websites have a history of promoting transparency and providing players and the industry with ample and trustworthy information about online casinos.

AskGamblers.com, which is owned by Catena Media, boasts an extensive database of FAQs about online gambling, and encourages its members to write casino reviews and provide rankings (AskGamblers.com, 2016a). The site has a high hit rate and is considered a useful source of information for both novice and experienced players alike. The website seeks to promote trustworthiness of online casinos among players by signalling which online casinos can be considered as a safe place to play. This is achieved by conferring an online casino with a Certificate of Trust that among other criteria requires that the casino maintains a ranking of 7.5/10 or higher (AskGamblers.com, 2016b). The importance of AskGamblers.com in the online gaming industry is recognized by the fact that it is currently shortlisted for best casino website (iGB Affiliate, 2016).

Unlike both Casinomeister and AskGamblers.com that are based in Europe and cater for a largely European market, Casino City is a US-based ranking website that was deemed suitable for cross-checking and triangulation purposes of the selected 19 online gambling websites in the sample. Casino City has been in operation since 1995 and is one of the largest online directories for gambling websites that provides veritable information, and

features an extensive overview of several thousand online casinos. It also provides rankings, an explanation of jurisdictions, games and providers, and lists supported languages, currencies, and payment methods together with other general information about casinos. In addition, in the recent past, Casino City has also been behind an unsuccessful attempt to legalize online gambling advertisement and the easing of restrictions in the US market (Casino City, 2016b; igamingnews.com, 2005).

Data gathering

Text data for this study was scraped, using Web Scraper (Balodis, 2014), from the About Us section for the websites chosen and investigated. The About Us section seeks to introduce the specific brand to the reader. It highlights the basis for differentiation of casinos as well as the product and services they offer (Nielsen & Tahir, 2001).

Lexical analysis

Computer-aided text analysis typically involves the use of software to analyse a set of texts. Such coding relies on dictionaries that consist of lists of words or phrases that the program uses to analyse content. There are various dictionary-based content analysis packages on the market; for example, CATPAC (www.terraresearch.com), ATLAS.ti (www.atlasti.com) and DICTION (www.dictionsoftware.com), to mention a few. Each has their advantages and disadvantages. DICTION was chosen for a number of reasons. First, there is evidence of successful and diverse use across different areas of research. For example, Lowry and Naser (2010) reported the analysis of US political campaigns and showed that it is a useful predictor of US presidential election results. Short and Palmer (2007) employed DICTION in strategic management and reported significant differences in word usage in mission statements based on organizational characteristics. In addition, DICTION has been reported in the study of leadership (Bligh, Kohles, & Meindl, 2004a, 2004b) and in accounting (Wisniewski & Yekini, 2015). Second, DICTION is a powerful and versatile tool that can quickly read a variety of text formats and can accept a large number of files within a single project. The program allows for the creation of tailored dictionaries but also includes a built-in database consisting of 50,000 previously analysed texts that enable standardized analysis (Digitext Inc, 2016). Third, the results obtained from DICTION can be employed in further statistical analysis thereby potentially providing a useful tool that can help better explore content. This was a major consideration in this research, given that the data was required for deeper analysis for a better understanding of the positioning adopted by the online casinos under investigation. Fourth, an important point that is highlighted in the *Using Diction Guideline* is that 'any study reporting DICTION results can be directly compared to any other study reporting DICTION results, making it more dependable than programs reporting raw scores only' (Hart & Carroll, 2015, p. 4). This feature allows for a continuation and comparison of research over time. Finally, DICTION was the content analysis software that was available and to which access could be obtained cost effectively.

DICTION version 7 was used to analyse the scraped data from the About Us sections. The software compares text (passages) with dictionaries and calculates scores for a total of 31 variables. These are then further amalgamated into five master semantic features that are grounded in earlier theoretical work (Short & Palmer, 2007). The five master semantic

features are Activity, Optimism, Certainty, Realism and Commonality and are defined in the online DICTION manual as follows:

> Activity captures language featuring movement, change, the implementation of ideas and the avoidance of inertia; Optimism reflects language endorsing some person, group, concept or event, or highlighting their positive entailments; Certainty captures language indicating resoluteness, inflexibility, and completeness and a tendency to speak with the full authority of office; Realism reflects language describing tangible, immediate, recognizable matters that affect people's everyday lives; Commonality measures language highlighting the agreed-upon values of a group and rejecting idiosyncratic modes of engagement. (Hart & Carroll, 2015, p. 5)

Results

The focus of the first part of the analyses was to investigate the website content of the chosen 19 online casino: how they present and position themselves and their similarities and differences. The output from the DICTION analysis provides z-scores for each website on the five master semantic features. The software converts verbal text into numbers. By way of example, when DICTION calculates each of the five master semantic features, such as Activity, this is computed using a particular formula: Thus, Activity = (Aggression + Accomplishment + Communication + Motion) − (Cognition + Passivity + Embellishment). However, as the *Using Diction Guidelines* notes, simply adding and subtracting the raw scores does not provide useful answers. Raw scores need to be standardized and DICTION does this via its normative database of 50,000 texts and converts the raw scores of each piece of text from each collection to a z-score. A z-score is a measure of how many standard deviations below or above the mean a raw score is. Besides calculating a z-score, DICTION adds a constant of 50 to eliminate negative z-score values together with a slight statistical correction by referencing it's normative databank. The mean for each of the 5 master semantic features therefore hovers around the 50 score with values above or below indicating higher or lower scores respectively.

The z-score results from DICTION appear in Table 1. In addition, web rankings of the different casinos under investigation were also collected from the Casino Tops Online website (www.casinotopsonline.com) that provides ranking on a 0 to 100 scale. This site has a ranking of European casino sites that is distinct and separate from the earlier websites from where the sample was identified. Although there are numerous online rating sites, most are limited in coverage and many do not provide a rating score. Fifteen rankings were obtained for the 19 online casino websites investigated. Those for two large players (Unibet and PaddyPower) and two smaller players (SlotsMillion and All Star Slots) were not available. Rankings data also appear in Table 1. Inspection of the graphical distribution of these ranking scores supports a normal distribution with a mean score of 84 (SD = 8.94).

The z-scores data in Table 1 were further analysed using the procedure described by Husson, Josse, and Pages (2010) who employed the Hierarchical Clustering on Principal Components (HCPC) facility available in the *FactoMineR* package (Lê, Josse, & Husson, 2008). This is one of the tools available for exploratory data analysis in the *R* statistical package (R Development Core Team, 2011). The objective of HCPC is to reduce data noise, transform data and provide better understanding of the data via the visualization of a hierarchical tree in a 3D-map.

In the first step z-scores data for the five master semantic features that result from the DICTION analysis are used as input to the HCPC procedure. This procedure simultaneously

Table 1. Z-scores of the 5 master variables for 19 different online casinos.

Casino	Activity	Optimism	Certainty	Realism	Commonality	Ranking on Casino Tops Online*
All Star Slots	51.27	57.21	56.33	44.75	51.90	–
BetAt Casino	49.60	54.08	52.74	46.81	48.63	71
Betspin Casino	49.19	57.57	49.38	49.97	49.97	88
Betsson	49.43	51.37	54.00	38.06	50.52	77
Casino Luck	49.96	58.47	41.35	42.38	50.08	80
CasinoEuro	47.94	65.76	47.89	44.45	49.76	88
Casumo	51.70	52.99	44.96	52.87	56.43	92
Energy	47.31	54.24	43.27	44.31	46.31	87
Guts	54.15	52.25	39.32	53.90	49.63	99
Lucky Red Casino	46.40	53.97	54.25	49.04	54.65	79
Mr Green	45.60	55.83	47.41	45.66	48.83	78
NordicBet	49.24	53.38	40.75	43.29	50.38	91
Paddy Power	51.13	54.31	44.63	47.70	48.12	–
RedBet	49.90	55.51	40.56	38.94	48.99	88
Rizk	50.31	53.88	42.74	43.92	51.90	94
SlotsMillion	49.21	57.51	50.24	50.69	49.44	–
Unibet	47.55	53.53	48.23	47.61	51.62	–
Vera & John	46.39	59.76	51.21	46.11	49.57	82
Videoslots	49.31	53.85	52.25	45.44	49.61	66

*Source: http://www.casinotopsonline.com/top-eu-online-casinos (accessed 15 July 2016).

undertakes a Principal Component Analysis (PCA) to identify dimensions that are statistically significant and proceeds to immediately use the resultant significant components to undertake Hierarchical Clustering. The objective of the PCA is to describe a data set using a small number of uncorrelated variables while retaining as much information as possible. In effect, the PCA is used as a pre-processing step to the hierarchical clustering that follows. The PCA allows for better visualization of the hierarchical tree and a better understanding of the data.

Husson et al. (2010) maintained that the output from the HCPC procedure, in terms of PCA map, hierarchical tree and clusters (Figures 1, 2 and 3), represents (1) the trend identified by the principal components and the clusters of the data on a single diagram, and that (2) the three-dimensional plot (Figure 3) provides additional information making it possible to determine whether two points that appear close together in the figure do or do not belong to the same cluster.

The HCPC procedure via *FactoMineR* uses the PCA as a technique to reduce the number of dimensions and it does not provide a matrix of factor loadings. Instead, the procedure computes η^2 to determine how much variance between groups is explained by the particular variable and provides a test of significance. The PCA results show that three of the five DICTION master semantic features are statistically significant, namely: Certainty ($\eta^2 = .73$; p<.001), Realism ($\eta^2 = .44$; p<.01) and Activity ($\eta^2 = .39$; p<.01), allowing for the use of these variables to capture the differences between groups and create the clusters – Table 2.

Hierarchical cluster analysis is a specific type of clustering that combines cases into homogenous clusters by merging them together one at a time in a series of sequential steps (Blei & Lafferty, 2009). The analysis employed is agglomerative and defined by the similarity or measurement of the distance between cases used and the linkages between clusters (Bratchell, 1989). The first cluster is characterized by Activity and Realism with a mean of the category of 52.93 (SD. 1.23) and 53.39 (SD. 0.52) respectively. The second cluster is characterized by low Certainty (Mean = 43.62; SD. = 2.75) while the third cluster is
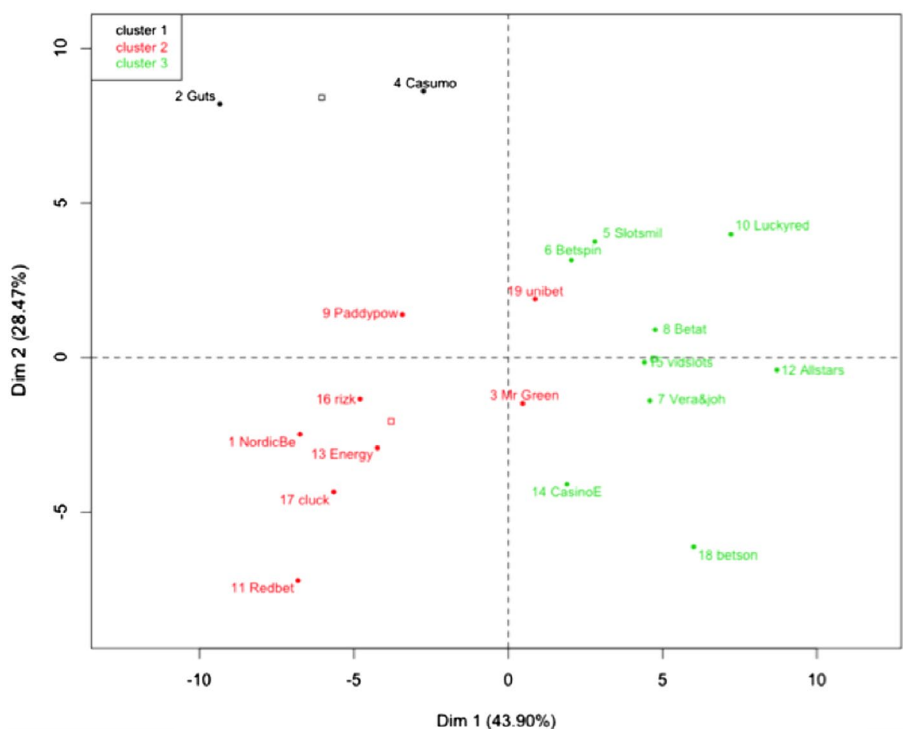
Figure 1. Factor map showing clusters from Principal Component Analysis. Legend: Cluster 1: Casumo, Guts; Cluster 2: Casino Luck, Energy, Mr Green, NordicBet, Paddy Power, RedBet, Rizk, Unibet; Cluster 3: All Star Slots, BetAt Casino, Betspin Casino, Betsson, Casino Euro, Lucky Red Casino, SlotsMillion, Vera & John, Videoslots.
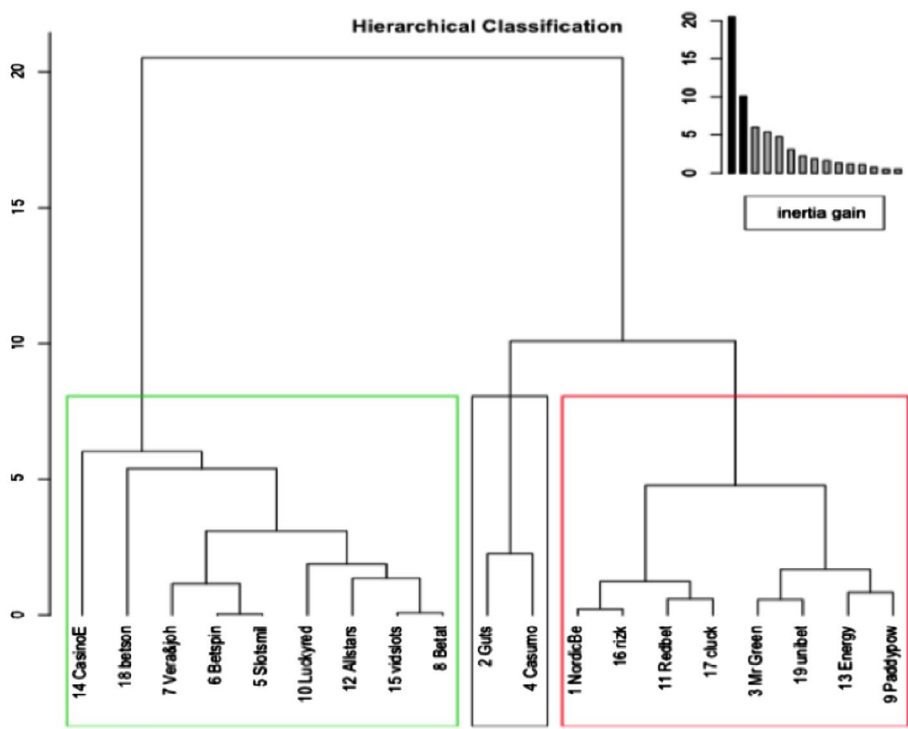

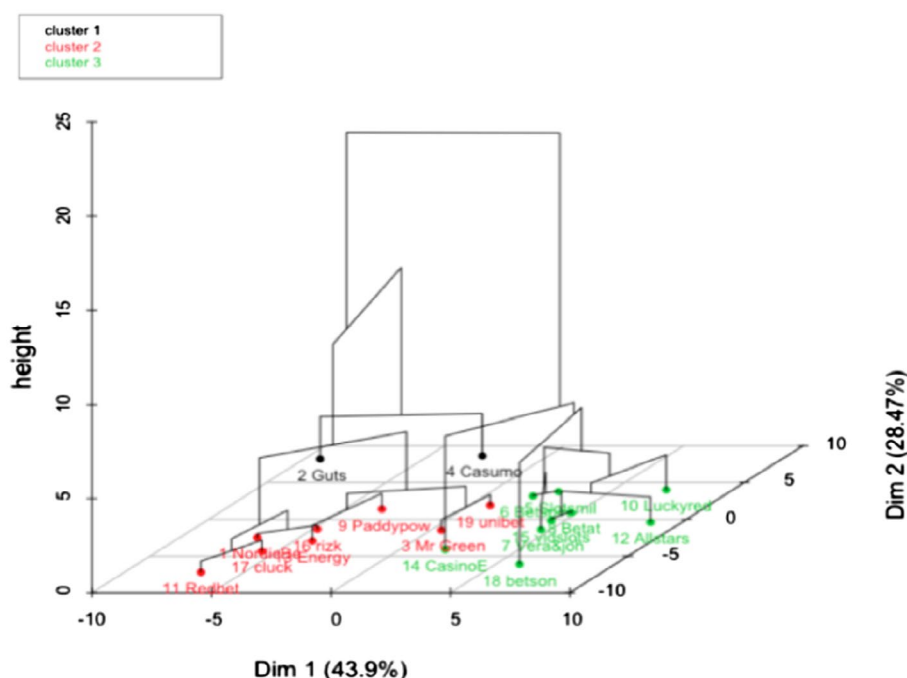**Figure 2.** Results of Hierarchical Clustering.

Figure 3. Hierarchical Clustering on Factor Map.

Table 2. Cluster description for DICTION variables from principal component analysis.

Cluster	DICTION Variable	Category mean	Category SD	Overall mean	Overall SD	v.test	p
1	Activity	52.93	1.23	49.24	2.02	2.65	0.01
	Realism	53.39	0.52	46.10	4.02	2.64	0.01
2	Low Certainty	43.62	2.75	47.45	5.10	−2.72	0.01
3	High Certainty	52.03	2.49	47.45	5.10	3.62	0.00

characterized by high Certainty (Mean = 52.03; SD. = 2.49). The other two master semantic features for Optimism and Commonality were not found to be significant and therefore omitted when the clusters were created.

The v.tests that appear in Tables 2 and 3 investigate whether the mean of the category in each cluster is equal to the overall mean. This compares the proportion of the words in a cluster to the proportion of the words in the total data. Results in Table 2 show that all are significant, thereby indicating differences. In the case of Cluster 2 the v.test is negative because the mean of the category is below the overall mean. Therefore, the online casinos from Cluster 1 are characterized by their use of text that emphasizes Activity and Realism. Those in Cluster 3 put emphasis on high levels of Certainty while those in Cluster 2 put an emphasis on low Certainty or risk-taking.

The clustering is also described by the first two principal components extracted, which are found to be statistically significant (Dim 1: η^2 = .75, p<.001; Dim 2: η^2 = .52, p<.01). The first two dimensions represent 72.4% of the total variance (or inertia) in the data. Results show that Dimension 1 links with Clusters 2 and 3 and therefore with Certainty, while

Dimension 2 links to Cluster 1, which is a composite variable for Activity and Realism – Tables 2 and 3. Moreover, the partitioning into the three clusters identified from the PCA are depicted in different colours and show a clear separation of the online casinos on the first two-principal components shown in the plot in Figure 1. The centres for each of the three clusters identified are represented by a square. The online casinos closest to the three clusters are Casumo for Cluster 1, Rizk for Cluster 2 and Videoslots for Cluster 3. Guts is the most specific to Cluster 1, RedBet to Cluster 2 and All Star Slots to Cluster 3 as these are the furthest from Clusters 2 and 3, Clusters 1 and 3 and 1 and 2 respectively.

The output from the hierarchical clustering provides a dendrogram that describes a visual display of the clustering process. Figure 2 shows the individual online casinos sorted according to the coordinate on the first principal component. An inspection of the dendrogram from the base upwards, shows casinos that are similar to each other joining up earlier as against those that are more dissimilar, while horizontal lines indicate the stages at which the clusters join up. Long vertical lines suggest clusters that are dissimilar from each other.

Finally, Figure 3 incorporates the two previous tables consisting of the principal component map and the dendrogram in a three-dimensional plot. It provides information of the factor map resulting from Principal Component Analysis together with a three-dimensional hierarchical tree, thereby providing a clearer view of the clustering. The figure shows that the clusters are distinct and separate with no overlap, thereby not necessitating re-running with a k-cluster algorithm. Results clearly identify three clusters that are projecting distinct positioning. The smallest cluster with just two firms (Guts and Casumo) emphasizes Activity and Realism with Casumo best representing the firms in the cluster. The second-largest grouping consists of Cluster 3 with eight firms that emphasize high levels of Certainty best represented by Videoslots, while the seven firms in Cluster 2 emphasize low levels of certainty (risk) best represented, not surprisingly, by Rizk.

A second objective of this research was to determine whether the identified clusters correspond to the web ranking of online casinos. To test whether the clusters obtained can differentiate between different online casinos a one-way ANOVA was used with ranking scores as dependent variable and cluster numbers as factor. The results in Table 4 provide support for the ability of the clusters to distinguish between online casinos and their ranking. Online casinos in Cluster 1 that emphasize Activity and Realism obtain the lowest rankings, those in Cluster 3 that emphasize Certainty are in a mid-position in terms of rankings while those that obtain the highest ranking are those emphasizing Risk (low Certainty).

Table 3. Clusters description by dimension from principal component analysis.

Cluster	Dimension	Category mean	Category SD	Overall mean	Overall SD	v.test	p
1	2	8.42	0.21	−1.34	4.19	2.92	0.01
2	1	−3.79	2.79	3.78	5.20	−2.72	0.01
3	1	3.65	2.18	3.78	5.20	3.65	0.00

Table 4. Results of one-way ANOVA.

Cluster	N	Mean	SD	F	Sig.
1	7	78.71	8.24	4.73	0.03
2	2	95.50	4.95		
3	6	86.33	6.22		
Total	15	84.00	8.94		

Conclusion and implications

This article set out to investigate two research questions. The first asked whether lexical analysis of text content from websites of online casinos could be used in clustering to identify positioning differences. This study therefore uses the analysis of lexical content to cluster a sample of nineteen online gambling companies and provides support for the presence of three distinctive clusters: low Certainty (high Risk), high Certainty and Activity/Realism.

The results provide managers with a methodology that combines text analysis via DICTION followed by Hierarchical Clustering on Principal Components that together provide a meaningful process for identifying the positioning of the different online casinos. The results from the sample analysis undertaken show the presence of three distinctive clusters of online casinos in the data investigated.

Online gambling companies have benefited from the emergence of Web 2.0. The new 'playground' that provides the possibility to play whenever, wherever and, moreover, anonymously has made the online gambling industry grow fast and develop into a highly competitive business environment. The customer is virtually king in this market, with a host of operators to choose from. Consequently, companies need to distinguish themselves in order to attract customers.

Indeed, corporate communications and clear market positioning online lie at the heart of effective strategic management, corporate identity and organizational reputation. The results from this study highlight the need for corporate and communication managers to make more judicious use of the text that is used on their websites. Unfortunately, such a task is too readily delegated to outside sources or junior staff with little input grounded in a clear and predetermined desirable positioning that the online casino is seeking to achieve.

The second research question in this study sought to establish whether the clusters defined from the process described could fruitfully be used to determine the market rankings of online casinos. The research therefore investigated whether there was any correspondence between the identified clusters and the web rankings of online casinos. The findings indicate that the clusters resulting from the lexical content of the About Us pages of the online casinos investigated can differentiate among the ranking of the casino websites by customers. Thus, brands in the cluster that emphasized high Risk (low Certainty) obtained higher-ranking scores than those that clustered on the basis of the high Certainty or Activity/Realism cluster.

These results confirm the often-held perception that one of the attractions of gambling is the thrill or excitement of beating the odds. It may therefore not be so surprising that the online casino websites within the high Risk (low Certainty) cluster are ranked higher. After all, risk is a core feature of gambling and possibly one of the reasons why people enjoy gambling. The results suggest that the lexical content would do well to highlight the aspect of risk on websites as they seek to obtain better rankings.

Limitations and further research

Like all studies, this research has a number of limitations that must be kept in mind. First, the DICTION software is limited to the analysis of text-based content. Other content, such as audio, video or images cannot be analysed using this tool. It is possible that a deeper insight could be gained by the inclusion and analyses of content from other communication channels such as email, SMS and social media. Second, the input to the HCPC was solely

based on the text content of the About Us section on the respective online casino websites operating in Europe. A wider range of pages may have proven useful, but this needs to be balanced with the relevance and scraping difficulties in including additional sections. Third, given the exploratory nature of this study, the sample size of nineteen is relatively small and a larger sample size may provide a more varied clustering solution, possibly enabling further insights on differentiation in the online gambling market. Fourth, it should also be noted that Casino Tops Online – the website from which rankings were obtained – does not provide details on how their rankings are computed.

However, being highly ranked on this site does not necessarily mean more customers or higher profit. Indeed, the online casino may even pay for ranking positions and an element of sponsorship may be involved, given that they are themselves a referring site and that two large firms (Unibet and PaddyPower), are somewhat mysteriously not listed. Finally, the sizes of the groups used in the one-way ANOVA are relatively small raising possible concerns about the power of the test. While groups of a size greater than 15 would have been desirable, the overall distribution of ranking scores does appear to be normally distributed and therefore offers support for the results.

In conclusion it can be said that despite the limitations described, the combination of lexical content analysis via DICTION with Hierarchical Clustering on Principal Components provides a promising technique in identifying positioning similarities and differences in website communications. These should prove useful to corporate and communication managers of online casinos and other online firms.

Conflicts of interest

Constraints on publishing

None.

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Notes on contributor

Jirka Konietzny is a PhD student, currently in his second year, with the Department of Business Administration, Technology and Social Sciences at Luleå University of Technology, Sweden. Working as a marketer within the online gambling industry himself, his research focus naturally centres on online gaming, with a particular interest in B2C marketing.

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