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Daily Deals in the Mediterranean Region: A Data Analytics Approach

Daily Deal (DD) websites have established themselves as an inventory distribution channel for hotels, yet they remain a largely underexplored topic in tourism. This paper seeks to provide insights into the nature of high-end DD websites through data analysis of individual offers' attributes, obtained by direct observation of three main hotel-focused DD websites and one review website. The preliminary analysis of the data reveals that specialised DDs are a marketplace for quality hotels that can be considered as a semi-permanent form of a distribution channel. The outcomes challenge the currently established literature by offering a novel perspective and a more in-depth understanding of DDs and their use by the hoteliers as a marketing tool and inventory distribution channel.

Key words: analytics, daily deals, tourism, hotel marketing, distribution channel

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Introduction

E-sales nowadays account for over 50% of total hotel sales globally (Bui et al., 2015) and thus, are becoming a key element in hotels' quests for successful promotion, positioning, as well as sales and revenue generation (Jiang, 2014; Law et al., 2014). The Internet-enabled channels, such as e-mail, websites, and third party Online Travel Agencies (OTA) sales, are considered effective means of capacity distribution and therefore have almost completely substituted the traditional distribution channels, e.g. mail, fax and direct phone calls (Stangl et al., 2016).

Another form of third-party distribution channels available to hoteliers these days are Daily Deal (DD) websites, such as Groupon or Secret Escapes. These websites successfully combine advertising benefits for merchants and substantial discounts for customers, whilst utilising the power of social media to propagate the offers. Similarly to OTAs, the DDs channels work on the basis of commission, ranging from 20-50%, but offer inventory that is limited in regards to the of rooms and time availability. The price is heavily discounted compared to the regular market price, occasionally even up to 90 %. (Piccoli & Dev, 2012; Parsons et al., 2014; Minor, 2017). In e-distribution channel terms, DD websites are considered a novel form of intermediaries selling distressed inventory to customers who previously agreed to become members of the channel (Berezina et al., 2016). Despite the DDs having only recently been regarded as distribution channels by the academia (Berezina et al., 2016), the DDs model has quickly established itself as a popular booking medium amongst the industry and the customers, with 34% of holidaymakers using DD websites to look for a cheaper holiday (Intel, 2015). Groupon alone recorded 46.5 million active subscribers in the first quarter of 2018, many of whom regularly consult the DD websites prior to purchasing hotel stays (Statista, 2018), while premium-orientated websites such as

Secret Escapes established themselves as a go-to platform for last-minute luxury bargain hunters (Mintel, 2018).

However, many questions regarding the DDs remain open in the literature as DD websites are still a fairly unexplored phenomenon and only a limited number of studies have been undertaken into the social, behavioural, economic and managerial aspects of the practice (Boon et al., 2012; Lee & Lee, 2012; Minor, 2017). The utilisation of DD websites is often accompanied by contrasting views regarding their use as a distribution channel, due to their impact upon profitability, reputation, brand and operational aspects of the hotels (Minor, 2017). To the best of the researchers' knowledge, all studies conducted so far focus on either studying the managerial or client adoption and implications of DDs, but they do not observe the DD websites in the tourism and hospitality context, nor do they collect the data directly from them. This paper adds to the wider academic discussions by addressing and attempting to confirm or deny basic existing assumptions about DD usage: 1) DDs are used in struggling destinations off-season; 2) DDs have a negative effect upon TripAdvisor (TA) reviews; 3) DDs are used by low-quality hotels, or hotels with poor online presence; 4) DDs are used as one-off promotions. This has been approached in line with Law, Buhalis and Cobanoglu's (2014) suggestion on how to progress the ICT-related knowledge in tourism, i.e. directly observing the characteristics of deals and hotels being featured on third-party websites in an inductive way. Furthermore, the paper seeks to address the question of the impacts of hotel DD engagement on the online reputation of hotels using the DDs.

For this purpose, the web data analytics approach was utilised, based on the observation of three main Europe-wide travel-focused DD websites of the newer generation, which offer real-time availability and no longer rely on coupons. Further, the quality scores of the hotels participating on these websites were observed on the TA review website. The gathered data were analysed in relation to the DD distribution, attributed to the deals offered and the quality

rating score attributed to those hotels. The research approach is rooted in the constructivist paradigm and is of exploratory nature. Based on the grounded theory methodologic approach of Berente and Seidel (2014), developed specially for information studies, the study aims to inductively generate new knowledge about DDs from emerging data patterns by performing a manual and computational content analysis of web data and extending the existing body of knowledge in relation to DDs.

Data collection and methodology

A two-pronged approach to data gathering was applied. First, to analyse the DDs as a distribution channel for hotel inventory, the data access was gained to three of the most popular, specialised DD websites that operate across Europe. In order to provide most uniform and transferable data, the researchers chose Secret Escapes, Very Chic and Voyage Privé as their focus, as the common denominator of the websites is their focus on offering upmarket and luxury discounted hotel stays. These are also rather focused on value than on discount in comparison to the generic DDs pioneers, such as Groupon, and they are the ones responsible for the sustained growth of the DDs business model in the hotel industry over the last few years. Such websites specialise in hotels, thus having become popular hotel reservation sites for less price-focused customers (Minor, 2017) and an even less-researched reality to the mainstream DD websites such as Groupon. The websites were observed between January and July 2018, a period which corresponds to the main booking window of the summer holidays for Europeans. The focus was on the Mediterranean countries that represent the number one choice for the summer holiday destination by the European holidaymakers (UNWTO, 2018). Total sample gathered was 13,963 DDs offered by 3,525 hotels across the following countries: Italy, France, Spain, Greece, Cyprus, Portugal, Morocco, Malta, Tunisia, Turkey, Egypt, Albania, Montenegro, Croatia, and Slovenia.

Data have been collated in the SQL database and processed in MS Access. For individual offers the following attributes have been mapped out to be observed, using Web parsing in JAVA script: destination, longitude, latitude, offer start date, offer end date, offer title, hotel name, and hotel address. For observed hotels, TA user ratings were also noted. TA is perceived as the dominant web portal where guests evaluate individual hotels and hence share their user experience, thus, was considered to best reflect the quality of participating hotels (Buhalis & Kaldis, 2008). Data have been analysed by applying descriptive techniques.

Results and discussion

Hotels using DD websites

As illustrated in Figure 1, the highest number of offered DDs in the observed time period comes from France, followed by Italy, Spain and Greece. These findings suggest two controversies in relation to the extent of knowledge to date. First, the literature suggests that DDs are used as a desperate measure of hotels who cannot sell their product at full price (Piccoli & Dev, 2012; Starkov, 2011), often caused by an unattractive or far-off location (Minor, 2017), however UNWTO (2018) data indicate that France, Spain and Italy were all among the top 5 worldwide countries with the biggest international tourist arrivals in 2017, and experienced an increase in international tourist arrivals in 2016, 5.1 %, 8.6 % and 11.2 %, respectively. Thus, considering the high frequency of DDs in these currently attractive and popular destinations, the obtained data indicates just the opposite of what the literature suggested to date, that de facto DDs are offered mainly by hotels in destinations where the tourist demand is currently higher. Second, DDs are recommended as a distribution channel for fulfilling the hotels' capacities in low, off-season periods, in which these capacities are difficult to be sold at a full price (Berezina et al., 2016; Minor, 2017). Given the above findings mapped out against peak season sales, the opposite seems to be true. DD promotions seem to be used as a means to generate sales equally during off- and on- season periods.



Figure 1: DDs by countries

The two above findings, to the best of the researchers' knowledge, have not been identified in the literature to date. Furthermore, this research suggests that DDs might be a demand- and not supply-driven inventory distribution channel, as it is currently believed in the literature (Berezina et al., 2016; Pearce, 2008), due to the fact that they are offered by already popular destinations. This may have far-reaching consequences and it may impact the perception and categorisation of the DD websites in the distribution channel spectrum. However, it is important to note that this conclusion is based on preliminary data analysis and more analysis is required to ensure if the same patterns remain for attractive and unattractive destinations within the countries.

Hotels quality ratings

The results of the quality analysis of hotels offering DDs have been depicted in Table 1. The literature suggests that typically DDs are used as a distribution channel in cases when hotels' regular offers have not been attractive enough to fulfil the capacities at full prices, or the hotels had unverifiable quality due to low online exposure (Piccoli & Dev, 2012; Minor, 2017). Additionally, the literature shows that DDs as a distribution channel are not suitable for luxury hotels (Yang et al., 2015).

Table 1: Number of TripAdvisor reviews and average ratings by countries¹

<i>Country</i>	<i>Italy</i>	<i>France</i>	<i>Spain</i>	<i>Greece</i>	<i>Portugal</i>	<i>Croatia</i>	<i>Turkey</i>	<i>Montenegr</i>	<i>Egypt</i>	<i>Slovenia</i>	<i>Tunisia</i>	<i>Cyprus</i>
No of TA hotel profiles	797	574	384	172	127	62	19	13	6	6	5	4
Average TA rating	4,27	4,20	4,17	4,37	4,27	3,95	4,58	3,42	4,33	4,00	4,10	4,25

The data gathered shows that those hotels using DDs as a distribution channel have on average 4.15 user rating on TA and relatively high amount of reviews, so the increase of their web presence is probably not their main goal for participating on DD websites, in spite Sigala's (2013) and Minor's (2017) research claiming that DDs can be used as a way to raise online hotel ratings and their online reputation. This study, however, suggests that hotels using the DD websites have relatively high TA scores, thus DD usage is not likely to be linked to hotel quality.

The frequency of DD websites use

Table 2 shows the frequency of DDs use by hotels in the observed area. The data indicated three levels of engagement with daily deal websites: single (one promotion), sporadic (minimum of two and maximum of six promotions), and frequent (one to three times a month). 1,371 or 39% of 3,525 hotels used DDs as single one-time promotion, before the beginning of high season. This type of use is in line with the current literature emphasising the promotional nature of DDs (Sigala, 2013). 1,614 or 46 % of 3,525 hotels used DDs between two and six times before the beginning of the high season in order to attain potential guests. This confirms findings of Berezina et al. (2016) and Minor (2017) who note that DD

¹ Number of TA reviews and average TA ratings by countries are based on those hotels that have been present at TA in the observed time window. Average TA rating per country has been calculated as the average of the ratings for observed hotels in a specific country.

channels are no longer used as one-off promotions, and can be considered as a form of a semi-permanent distribution channel.

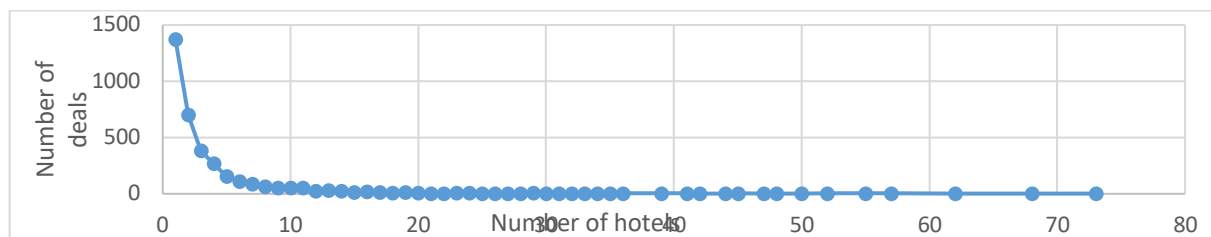


Figure 2. The frequency of DDs by hotels

540 or 15% hotels can be classified as frequent users who used DDs on average between once and three times per month. This indicates the constant usage of DDs as a fully functional distribution channel. The last group consists of hotels that fully rely on DDs and are constantly present on the portals offering DDs. These hotels have been offering DDs more than 20 times within the observed period. Findings of Beritelli and Schegg (2016) might suggest that these hotels strive to use DDs to ensure a greater reach of guests and thereby increase their visibility in a wider geographical area. Given the above, one needs to ask how the distribution strategy that relies on the continuous offering of DDs affects the price perception of guests. The risk of price and brand erosion in case of constantly being present on DDs portals has been indicated by Dholakia (2011), Wu et al. (2012), Minor (2017). This creates the question of whether hotel customers of hotels in this last group are prepared to buy the service of these hotels at the full price using the non- discounted distribution channels.

Conclusions, limitations and future research directions

This research forms three key contributions. First, an analysis shows that within Mediterranean countries, DD websites have become a distribution channel that is predominantly used by hotels in the destinations that do not have problems with attracting tourists. This puts into question the dominant stream of literature that considered the DDs as a

supply-driven instrument studying the motivation of the merchants to participate in such promotions. To date, the literature suggested DDs to be promotional channels used to offload distressed inventory of struggling hotels in the offseason and harmed by being located in unpopular destinations; e.g. contrary to findings from Berezina et al. (2016), these findings revealed that fewer DDs were offered in areas which are struggling to attract tourists due to safety and security, such as Egypt or Tunisia. Second, DDs have become a distribution channel for hotels in the off, as well as in the top season. Third, the analysis revealed that contrary to the previous belief, DD channels do not tend to be used by hotels characterized by low-quality ratings.

Future suggested research should uncover the operating modes and business models of DD websites and further investigate the relationship between hotel DD offers and corresponding TA's ratings. These could reveal how the hotels' ratings change if the frequency of hotels' DD offers increases or decreases. Further, a more detailed analysis relating to specifics of destinations in which most DDs are coming from within one country needs to be conducted in order to be able to establish with some degree of certainty whether DD websites are indeed a demand-based distribution channel. Also, the researchers are aware that the different variations of hotel names and tagged geolocations might have impacted on the share of hotels that could be linked directly to their TA profile. Lastly, the paper is based on a preliminary analysis of the data obtained and further, more in-depth analysis using more sophisticated computational methods is required to identify patterns emerging within the destinations.

References

Berente, N., & Seidel, S. (2014). Big Data & Inductive Theory Development: Towards

Computational Grounded Theory? *Proceedings of the Twentieth Americas Conference on Information Systems*, 1–11. Accessed via: <https://pdfs.semanticscholar.org/885b/39f1ce02a47e540832f30fc121b318f42dc2.pdf>

- Berezina, K., Semrad, K., Stepchenkova, S. & Cobanoglu, C. (2016). The Managerial flash in the dash: Is there advantage or disadvantage at the finish line? *International Journal of Hospitality Management*, 54, 12-24.
- Beritelli, P. & Schegg, R. (2016). Maximizing online bookings through a multi-channel-strategy. *International Journal of Contemporary Hospitality Management*, 28(1), 68-88.
- Boon, E., Wiid, R. and Des Autels, P. (2012). Teeth whitening, boot camp, and brewery tour: A practical analysis of 'deal of the day', *Journal of Public Affairs*, 12(2), 137-144.
- Buhalis, D., & Kaldis, K. (2008). eEnabled internet distribution for small and medium sized hotels: the case of hospitality SMEs in Athens, (January).
- Bui, M.-T., Jeng, D. J.-F., & Lin, C. (2015). The Importance of Attribution: Connecting Online Travel Communities with Online Travel Agents. *Cornell Hospitality Quarterly*, 56(3), 285–297.
- Dholakia, U. (2011). How businesses fare with daily deals: A multi-site analysis of Groupon, LivingSocial, OpenTable, Travelzoo, and BuyWithMe Promotions, *Rice University Houston Working Paper*, accessed on 19th March 2012 via: <http://www.ruf.rice.edu/~dholakia/>
- Jiang, L. (2014). *Revenue management in a multi-channel environment: the effect of pricing strategies on perceived fairness*. PhD Thesis. University of Nevada, Las Vegas.
- Law, R., Buhalis, D. & Cobanoglu, C. (2014). Progress on information and communication technologies in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 26(5), 727–750.
- Lee, I. and Lee, K. (2012a), Social shopping promotions from a social merchant's perspective, *Business Horizons*, 55(5), pp. 441-451
- Minor, K. B. (2017). *Hospitable or Hostile? The Impact of Daily Deals in the Hotel Sector of the Hospitality Industry*. Cardiff Metropolitan University.
- Mintel (2015). The Premium vs Budget Traveller - UK - February 2015, Mintel
- Mintel (2018). Short and City Breaks - UK - July 2018, Mintel
- Parsons, A. G., Ballantine, P. W., Ali, A., & Grey, H. (2014). Deal is on! Why people buy on daily deal websites. *Journal of Retailing and Consumer Services*, 21(1), 37–42.
- Pearce, D. G. (2008). A needs-functions model of tourism distribution. *Annals of Tourism Research*, 35(1), 148–168.
- Piccoli, G and Dev, C S (2012). Emerging Marketing Channels in Hospitality: A global study of internet flash sales and private sales, *Cornell Hospitality Report*, 12 (5).
- Sigala, M. (2013). A framework for designing and implementing effective online coupons in tourism and hospitality. *Journal of Vacation Marketing*, 19(2), 165–180.
- Stangl, B., Inversini, A., & Schegg, R. (2016). Hotels' dependency on online intermediaries and their chosen distribution channel portfolios: Three country insights. *International Journal of Hospitality Management*, 52, 87–96.
- Starkov, M. (2011). It's official: the dumbest hotel distribution idea! HeBS Digital. Retrieved on June 6, 2012 from <http://www.hebsdigital.com/blog/it%E2%80%99s-official-the-dumbest-hotel-distribution-idea/>
- Statista (2018). Number of Groupon's active customers from 2nd quarter 2009 to 2nd quarter 2018 (in millions), available at: <https://www-statista-com.ezproxy.cardiffmet.ac.uk/statistics/273245/cumulative-active-customers-of-groupon/>
- UNWTO (2018). UNTWO Tourism highlights 2018 Edition, available at: <https://www-e-unwto-org.ezproxy.cardiffmet.ac.uk/doi/pdf/10.18111/9789284419876>
- Viglia, G., Minazzi, R., & Buhalis, D. (2016). The influence of e-word-of-mouth on hotel occupancy rate. *International Journal of Contemporary Hospitality Management*, 28(9), 2035–2051.

- Wu, J., Kimes, S. and Dholakia, U. (2012). Restaurant daily deals: The operator experience (online version), *Cornell Hospitality Report*, 12(16),
- Yang, W., Zhang, L., & Mattila, a. S. (2015). Luxe for Less: How Do Consumers React to Luxury Hotel Price Promotions? The Moderating Role of Consumers' Need for Status. *Cornell Hospitality Quarterly*.