ASSESSING THE RELATIVE PERFORMANCE OF ONLINE ADVERTISING MEDIA

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ABSTRACT

Online marketing campaigns are the big trend in today's advertising world. The obvious advantages of online ad media – low costs, multiple tracking options and better segmentation -, are forcing marketing managers to re-allocate big portions of their advertisement budgets from traditional offline marketing media to online ad campaigns. Several digital communication channels are suitable for online advertising, each serving different communication goals - awareness, engagement, traffic generation, lead generation and sales conversion – according to the overall brand strategy. Yet, which channel or mix of channels should advertisers or marketing agencies employ in order to best achieve its communication goals is something that still remains highly unclear. This is particularly true for advertising markets outside the USA.

The overall aim of this dissertation was hence to compare the performance of different advertising media channels – E-mail marketing, Social Networked Media and Paid Search -, with performance being assessed from the viewpoint of a digital marketing agency, both in terms of campaign effectiveness (traffic and lead generation) and campaign profitability (ROI). To this end, secondary panel data regarding the features and performance of six online ad campaigns (five of which were conducted in more than one channel), namely click-through rates (CTR; traffic generation), lead conversion rates (LCR; submission of a registration form) and Return-on-Investment (ROI), conducted over the course of the first trimester of 2014 were compiled. OLS multivariate linear regression analysis was then performed to understand which channel and campaign features significantly affected campaign effectiveness and profitability. Moreover, primary data were also collected by selecting a poorly performing campaign, optimizing it based on the results of the secondary data analysis, re-launching it and re-analyzing its performance results.

Results show that e-mail marketing campaigns seem to be the most effective and the most profitable ones for digital marketing agencies operating under performance (lead conversion)-based pricing models. Social Networked media such as Facebook, however, seem to perform better when the campaign goal is drive traffic to advertisers' websites, as CTR rates for this channel tend to higher on average. Regarding the quasi-experiment done, E-mail and Google had similar performance in terms of target effectiveness. The number of conversions was also similar, However, Google had substantial higher costs, due to the number of impressions. After dropping that channel, campaign's results have improved. Nevertheless, the increase in the number of leads may have been due to E-mail

design rather than the channel choice.

Keywords: online advertising, media channels, digital media performance, multi-channel campaigns, E-mail Marketing, Facebook Ads, Google Ad Words

SUMÁRIO

Atualmente, as campanhas de publicidade on-line são uma grande tendência entre as empresas. As principais vantagens dos canais on-line – como por exemplo os baixos custos associados, as opções de *tracking* e de segmentação, motivam os *Marketers* a re-alocar uma parcela maior do orçamento total de Publicidade do tradicional para campanhas online.

Existem diversos *media* on-line que podem ser usados, assim como objetivos diferentes - *branding*, aumento das vendas ou captação de bases de dados. No entanto, ainda não é claro o que o canal on-line mais apropriado para uma empresa, consoante o objetivo traçado. Ainda, a maioria dos resultados só dizem respeito ao mercado dos EUA.

Esta tese visa compreender o desempenho dos canais *E-mail Marketing*, anúncios do Facebook e Google Ad Words, tendo em conta três objetivos diferentes: geração de tráfego para o site do cliente (número de cliques) , o preenchimento de um registo (número de conversões) e o ROI médio por canal . Devido à parceria com Revshare , uma agência digital Português, todos os resultados são baseados sobre a perspectiva da agência.

Foram analisados dados secundários de 6 campanhas, lançadas no primeiro trimestre do presente ano, no mercado Português - 5 das quais são campanhas multi-canal. Foi realizado uma análise descritiva dos dados obtidos. Também foram recolhidos dados primários, com o objetivo de avaliar o impacto da escolha dos canais no desempenho dos mesmo. Foi realizada uma regressão linear OLS com o intuito de entender quais as variáveis que têm impacto no número de cliques, conversões e ROI.

Concluindo, o E-mail aparenta ser o canal mais adequado quando o objetivo é a conversão. Além disso, é o único com um ROI positivo. Os anúncios do Facebook são uma boa opção em direcionar o tráfego para o site do cliente. Relativamente à expriência realizada, tanto o canal E-mail como o Google tiveram uma performance semelhante em termos de leads e segmentação. Contudo, devido ao maior número de impressões gerados pelo Google, os custos deste canal foram substancialmente mais elevados. Assim, e depois de ter sido retirado este canal, os resultados da campanha melhoraram. No entanto, esta melhoria poderá ter sido originada pela alteração do design do E-mail e não pela combinação de canais.

Palavras-chave: publicidade on-line, canais online, desempenho de canais digitais, campanhas multi-canal, E-mail Marketing, anúncios Facebook, Google Ad Words

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GLOSSARY

Advertiser: an individual or organization, which has ad campaigns or creative to run online.

Affiliation: a type of advertising system based on the CPA payment method whereby web sites run advertisers' banners getting paid on any sales or registrations that result from visitors that click on the banner.

Agency: an organization that provides a variety of ad services for advertisers, including helping them design creative and locate the best place to run their advertising campaign.

Campaign: can refer to the entire process of planning, creating, buying and tracking an online advertising project from start to finish.

Conversion Rate: the percentage of visitors who completed a desired action (e.g., product purchase or lead generation) after clicking on one of your ads.

CPM: Cost per thousand (CPM) is an online payment model where advertisers pay for every 1000 impressions of their advertisement.

CPC: Cost per click (CPC) is an online payment model where advertisers pay for each click-through their ad receives.

CPA: Cost per action (CPA) is an online payment model where advertisers pay for ever action (sale or registration) completed as a result of a visitor clicking on their advertisement.

CPL: Cost per lead (CPL) is a method that allows advertisers to pay for every lead or customer inquiry that resulted from a visitor who clicked on one of their advertisements.

CTR: Click through rate (CTR) is the rate at which viewers click on an advertisement.

Display Advertising: Advertiser pays an online company for space on one or more of the online company's pages to display a static or linked banner or logo.

Geo targeting: is the practice of targeting ads to web users based on their physical location. This is determined by matching their IP address to a database of IP addresses.

Impression: The number of times a banner ad was requested and presumably seen by users.

Lead Generation: fees paid by advertisers to online companies that refer qualified potential customers or provide consumer information (demographic, contact, and behavioural) where the consumer opts in to being contacted by a marketer (E-mail and/or postal address, telephone and/or fax number).

Publisher: A website owner who runs advertising on their site.

Social Media Engagement: the number of interactions generated in social media channels, as measured by metrics such as Facebook "Likes", Blogs comments or YouTube video views.

Rich Media: A general term to refer to any advanced type of advertising, such as Flash ads, video ads, expandable ads, floating ads, rollover ads and HTML ads. These are differentiated from basic image ads.

CHAPTER 1: INTRODUCTION

This chapter introduces the topic of research and the main aims of the present dissertation. It starts by providing background information about online advertising and identifying the research problem. The main aims of the dissertation and the specific research questions addressed are then presented. The academic and managerial relevance of such aims and questions are also discussed. Next, the research methodology employed to answer the proposed research questions is briefly described. The chapter ends with the dissertation outline.

1.1 Background

Web 2.0 introduced the possibility of close and continuous interaction between organizations and consumers. With it, companies now have the ability to communicate with customers and receive their feedback almost instantaneously (Liu, 2009). As a result, they are becoming more and more aware of how digital marketing activities can engage customers and increase collaborative innovation (Chao, 2012). Marketers, in particular, are now better equipped with expanded advertising capabilities.

The recent global economic crisis enhanced further some of the natural advantages of digital marketing activities. Advertisers are quickly moving from traditional media to online campaigns, where costs are generally lower and performance is more easily measured (Fulgoni, 2009). Marketing managers, on the other hand, are embracing online ad strategies due to the high level of customization, interaction, tracking and immediate reaction they enable. All these factors potentially increase the likelihood of purchases and other valuable transactions with customers.

According to *eMarketer* (McCarthy, 2013), the amount of online advertising investment worldwide in 2012 topped $100 billion, with $ 40.7 billion spent on paid search, $ 33.7 billion on display ads and $ 11 billion on internet classifieds. Retail (20%), financial services (14%), automobile (12%) and telecommunication (9%) industries accounted for the majority of online ad revenues. Search Engines (43%), display ads (19%) and mobile (17%) were the top three ad formats employed. Investments on digital video and rich media ads did not yet reach a 10% market share, but are set to know the highest growth rates in the coming years (Lunden, 2013).

Among the formats of online advertising most commonly employed worldwide today (Figure 1.1) are Search Engine Marketing (SEM), Display ads, Mobile Marketing, Social Media and E-mail Marketing.

Figure 1.1 - Forecast - US Interactive Marketing Spend, 2011 to 2016, (Research Interactive Marketing Forecasts, 2011).

	2011	2012	2013	2014	2015	2016	CAGR
Social media	$1,590	$2,119	$2,760	$3,453	$4,217	$4,995	26%
Email marketing	$1,510	$1,694	$1,875	$2,066	$2,262	$2,468	10%
Mobile marketing	$1,652	$2,777	$4,238	$5,697	$7,057	$8,237	38%
Display advertising	$10,949	$12,860	$16,085	$19,783	$23,919	$27,600	20%
Search marketing	$18,756	$21,553	$24,613	$27,515	$30,433	$33,319	12%
Total	$34,457	$41,003	$49,571	$58,514	$67,888	$76,619	17%
Percent of all ad spend	19%	21%	25%	29%	32%	35%	

The US online advertising market alone was responsible for generating revenues of $42.8 billion in 2013. In terms of advertising shares in this country, search engine ads were the leading format (ca. 42%), followed by display and mobile ads (ca. 20% each) (PwC, 2014). Meanwhile, the European online ad market was worth about €24.3 billion in 2012. In this region, online advertising spent per capita shows a linear growth from 2006 to 2012. Moreover, and for the same period, the online market share budget more than doubled – from 10,3% to 25,6%, which means that €1 in €4 spent on advertising went to online media. Paid search formats represented ca. 49% of the online advertising share, while display ads accounted for a little over 32% (of which nearly half corresponded to video ads), and classifieds for over 18% (Fennah, 2012).

Efficient promotional channel management and the measurement of online advertising return on investment (ROI) are not straightforward to achieve, particularly when online and offline advertising activities are necessarily integrated, as it is often the case in many industries. Several studies (Chao, 2012, Laroche, 2013) have shown that advertising effectiveness increases when online and offline channels are well matched in the design and execution of promotional campaigns, with online channels positively impacting offline sales (Dinner, 2011). Yet, and according to the CMO Council Survey (Anonymous, 2012), 36% of American companies recognize that they still do not have an integrated communication strategy combining digital with traditional advertising media. Meanwhile, 35% claim to have

already identified a possible strategy, but being still testing which is the best business model to pursue. At the end, only 8% of US companies seem to have a clear strategic path in what concerns online advertising.

Despite the importance of digital marketing, it seems thus that most companies are still trying to learn how to best leverage use online ad channels in their marketing communications. It becomes therefore of great managerial interest to be able to compare the performance of different online advertising media. Moreover, companies must also be equipped with tools that allow the continuous monitoring of online advertising costs. After being able to compare performance and measure costs, companies should then be able to more easily and accurately establish their online advertising strategy, particularly when such strategies involve multiple online communication channels.

Marketers today aim to influence online users at any stage of their buying decision process in which they might be open to receive and process information about offers, that is, at the so-called consumer touch points (Court, 2009). Until recently, consumer touch points were considered to be sequential and relatively independent from each other, in what was conceptualized as the funnel buying decision process (Figure 1.2) (Court, D. et al, 2009).

| Awareness | ➤ | Familiarity | ➤ | Consideration | ➤ | Purchase | ➤ | Loyalty |
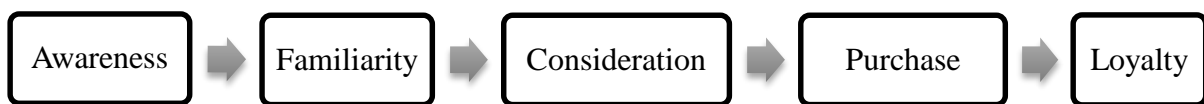
Figure 1.2 - Funnel decision (The consumer decision journey, 2009 by Court, D. et al).

With the explosion of the Internet and digital media, and the consequent empowerment of consumers, touch points have multiplied exponentially and buying decisions processes themselves have become highly iterative, rather than sequential, in what has been coined as *the consumer decision journey* (Figure 1.3) (Court et al., 2009). Multi-channel campaigns were originated due to these changes. Also, such circular decision process necessarily implies a relationship between decision stages.

Multi-channel campaigns may have several types of objectives. Two main types of online advertising campaign goals are typically pursued - branding or performance (Nielson, 2013). Companies set branding objectives when they want to shape consumers' perceptions about the brand – positioning. On the other hand, performance is all about direct response of consumers, that can be translated into sales/revenues (Nielson, 2013).
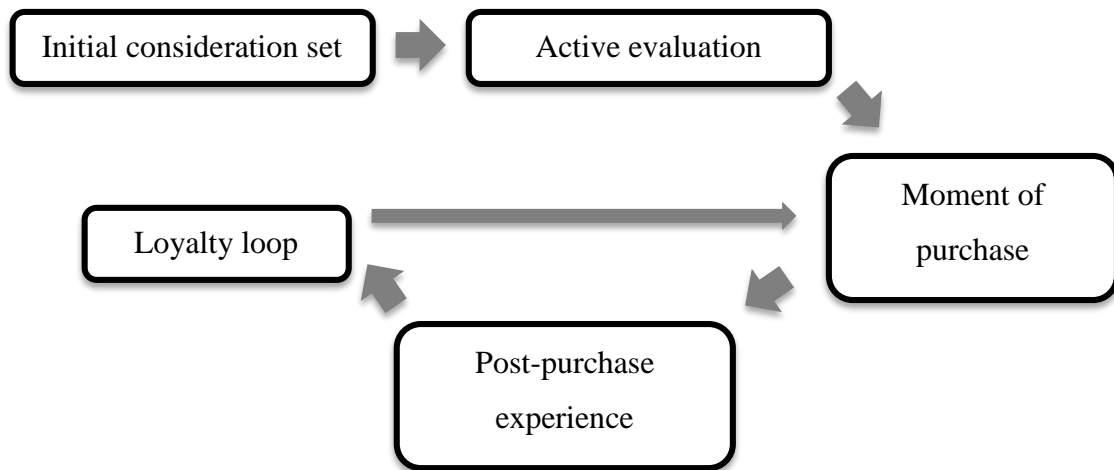
Figure 1.3 - Consumer Decision Journey (The consumer decision journey, 2009 by Court, D. et al).

1.2 Problem statement

Companies are increasingly using digital marketing to reach consumers, who are spending more and more time in multiple online platforms. This implies that hundreds of millions of dollars are spent by advertisers in an attempt to place their brands in high-traffic websites (Smith, 2011). In order for ad investment to become more rational and effective, it is crucial for companies to be able to match campaigns' objectives with the channels that deliver the best performance for a particular marketing aim. When this succeeds, marketing managers will no longer need to randomly waste time and resources figuring out what ads work best. They will be able to select the best combinations of online channels for each type of campaign and target, enabling them to accomplish their marketing communication and sales goals.

Until now, research does not provide enough information concerning the optimization of online multi-channel campaigns, particularly in markets outside the US. Although is it a relevant phenomenon, it is also a recent one, implying that is still being studied. This dissertation attempts to fulfill this knowledge gap.

1.3 Aim

The main aim of this dissertation is to compare the performance of different advertising media channels for a particular online marketing campaign, with campaign performance being assessed both in terms of effectiveness (traffic and lead generation) and profitability (ROI).

To achieve the proposed aim, answers were sought for the following research questions:

1. Which channel typically generates the highest number of leads in multi-channel online ad campaigns?
2. Which channel typically generates more traffic to advertisers' websites in such campaigns?
3. Which channel typically yields the highest ROI in multi-channel online ad campaigns?

Whereas answers provided for research questions 1 and 2 benefit advertisers, publishers and digital advertising agencies alike, answers to questions 3 and 4 are essentially of value to digital advertising agencies. Profitability and ad campaign optimization from the viewpoint of agencies, rather than advertisers, has seldom been researched. To this end, Revshare, a Portuguese integrated, strictly digital, performance-based marketing agency, operating in several country markets, established a protocol with Católica-Lisbon in order to collaboratively advance research in the field of online advertising. The present dissertation was conducted under this protocol and benefited greatly from Revshare's technical and market expertise, as well as from access to their campaign data and other relevant market intelligence information.

1.4 Scope

In the course of this dissertation, the overall performance of different online advertising media channels over time was assessed by comparing their relative performance in a set of six multi-channel online ad campaigns conducted by Revshare during the first trimester of 2014.

These campaigns were commissioned by four of Revshare's multinational client advertisers with activities in Portugal – one by a mail order/e-tailer in the fashion and home décor industry, another by an insurance company, three by a security company and one by a health care (equipment and service) company. In spite of the heterogeneity of the advertising industries involved, individual campaign goals and campaign duration were kept constant. Aligned with Revshare's performance-based business model, campaign goals for each campaign were set as to generate the maximum number of leads at the lowest cost in a pre-specified period of time.

All six campaigns studied took place exclusively in the context of Portuguese B2C markets and involved at least two ad media channels, out of the three deemed to be the most interesting and representative of the online ad industry:

- Paid Search Ads
- E-mail Marketing
- Social Network Ads

The media channel mix varied across the six campaigns, but was restricted to combinations of E-mail promotional messages, Google Ad Words campaigns and Facebook Display Ads. The fact that the campaigns under analysis were exclusively launched in Portugal excludes potential confounding country market effects on campaign performance and allows for an original study of a European online advertising market. Although campaigns were exclusively launched in Portugal comprising three industries, conclusions about their performance should be amenable to generalization to other European markets. Currently, all studies about multi-channel optimization have been made based on the US and Indian markets, so this dissertation advances current knowledge about the online advertising industry in other markets.

E-mail Marketing refers to the activity of "*creating, communicating, delivering and exchanging offers that have value customers*" via electronic messages, according to The American Marketing Association (AMA). The choice to study promotional E-mailing was related to the fact that this is a widely used communication channel and makes for a highly targeted and very cheap form of advertising (Laudon, 2013). Moreover, the following statistics support the choice of this media (Shah, 2013):

- 91% of consumers check their E-mail account on a daily basis;
- 60% of marketers believe that this media is responsible for generating a positive ROI;
- 66% of consumers have made a purchase derived from e-mail campaigns;
- The estimated ROI of E-mail Marketing is 4.3%, so in the ballpark of paid search ads.

Paid search advertising refers to displaying an ad on the search engine results page (SERP), after paying a fee. Every time specific keywords are typed on search engines, the ad will appear on SERP (HubSpot, n.d.). This media channel was chosen given the fact that it is the most widely used by online advertisers and has a high effectiveness (Fennah, 2012). Paid search market is dominated by Google's Ad Words company.

Finally, Facebook display ads were also chosen because this is a growing trend and because display advertising overall is making a comeback, pushed by social media marketing

(Barefoot, 2010, Hafele, 2011). Facebook is also the dominant social networked media in Portugal, with over 4 million users in 2013 (Journal Expresso, 2013).

1.5 Methodology

In order to analyse and compare the relative performance of online advertising media channels, a descriptive research approach was first employed. In it, secondary data about the features and performance of past advertising campaigns, ran in multiple channels, were analysed. Based on this, some empirical generalizations about the channels' relative effectiveness - namely in terms of lead generation potential and profitability for digital advertising agencies - were drawn.

Subsequently, a more explanatory research approach was taken, where some of the empirical generalizations resulting from the analysis of secondary data were tested. This was achieved through the performance of a field study and the collection of primary data relative to one single-channel online ad campaign. This campaign was selected based on the features and past performance of similar, multi-channel online ad campaigns ran by the same advertiser and publisher, which had been part of the secondary data set earlier explored.

1.6 Relevance

The recent economic crisis led managers to become more rational and use more wisely the available resources. Marketing managers, in particular, are increasingly asked to measure and present the results of every advertising campaign launched (Fulgoni, 2009). Consequently, companies are moving their efforts to online channels (Chao, 2012).

Several scholars have studied the topic of the optimal management of advertising efforts in the digital age. They have focused on how to best integrate the use of online and offline channels (Chang, 2004, Li, 2004, Wakolbinger, 2009, Dinner, 2011), on assessing the effectiveness of banner ads (Manchanda, 2006, Braun, 2013) and on the performance of integrated marketing communications strategies (Mulhern, 2009, Reinold, 2012, Taylor, 2010). But only a very small number of studies have investigated the optimization of multi-channel advertising campaign and even less have envisaged the comparison of online ad channel performance based on actual campaign data (Chao, 2012, Danaher, 2013, Mulhern, 2009).

This dissertation presents and discusses empirical findings about the overall performance of different online advertising media channels over time, based on the comparison of their

relative performance in a set of six recently conducted multi-channel online ad campaigns. Such a study enabled the assessment of campaign performance for the first time in a European market, both in terms of effectiveness (traffic and lead generation) and profitability (ROI), taking industry effects into account. It is also one of the few studies to investigate the issues of online ad campaigns' strategic choices and profitability from the agencies' (and not the advertisers) viewpoint (Hu, 2010, Kotler, 2008, Novak, 2000).

Taken together, the answers given by this dissertation to the proposed research questions will hopefully enable a better and more detailed evaluation of the overall performance of online advertising campaigns. Equipped with this type of knowledge, advertisers, publishers and digital marketing agencies alike should be better prepared to optimize the allocation of their resources to different online ad media.

1.7 Outline

Chapter 2 presents a literature review on the state-of-art of research about online advertising, digital marketing performance, integrated marketing communications and multi-channel advertising strategies. Based on the conclusions of this review, three research hypotheses are put forward. Chapter 3 describes the research methods, data sets and statistical analysis performed. Chapter 4 presents and discusses the results obtained, and assesses whether or not the proposed research hypotheses were confirmed. Chapter 5 provides the main conclusions that can be drawn with respect to the proposed research questions. It also presents this dissertation's main academic and practical implications, as well as its most important limitations. Finally, it concludes by making some suggestions for future research in the area of digital marketing in general, and online advertising in particular.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Chapter 2 presents a review of extant literature on online advertising (historical evolution, formats, markets, players and pricing models), digital marketing performance - including performance metrics -, integrated marketing communications, multi-channel advertising campaigns and the Portuguese online advertising industry. Based on the findings of this review, three research hypotheses are formulated for further statistical testing.

2.1 Online Advertising

Several ways have been used by scholars to categorize online advertising. Thomas Lorrie (2011), for instance, divides them into ten different formats (Table 2.1).

Table 2.1 - Online advertising formats and examples (Lorrie, 2011).

Online advertising formats	Examples
Vertical Search	Online yellow pages, job/local and product searches
Display Advertising	Banner ads, like images or video, on websites
E-mail Marketing	Newsletter
Viral Marketing	Any marketing message massively spread by consumers
News Sites	Google Ad Words, AdSense, Yahoo! Publisher Network
Blog Marketing	BlogHer, SocialSpark
Behavioural Advertising	Retargeted ads
Social Media Marketing	Facebook ads
Contextual Advertising	Specific words on a website have a link
Affiliate Marketing	Amazon Associates

A more contemporary, and perhaps more appropriate way of organizing the currently available online ad formats is from a strategic viewpoint. This consists in classifying them according to whether they can be a source of external cost or external revenue for a company. In this way, three major groups of online advertising - paid, owned and earned -, can be considered, each associated to a specific set of media channels (Edelman, 2010).

Paid search ads are closer to traditional media ads, whereas owned media correspond to channels that advertisers themselves own, such as corporate websites or Facebook pages. The essence of earned media, on the other hand, is related with leveraging the digital word-of-mouth, mainly on social media. Two other groups - sold and hijacked online advertising

(Table 2.2) -, should also be added, to account for the growing importance of social media and affiliate networks in companies' marketing communication activities (Edelman, 2010).

The relevance of paid media increased with the possibility of better targeting ads to consumers through several formats – e.g. display ads, online videos and search ads. Owned media is now also a hot topic due to social media marketing activities, such as those taking place in social network media like Facebook. Nevertheless, it is crucial for enterprises to continue updating their own websites and deliver relevant information by e-mail marketing (Edelman, 2010).

Table 2.2 - Types of online advertising media (Edelman, 2010).

Type	Definition	Examples
Paid	Whenever a third party media space is bought to promote companies´ products	Display and Paid Search ads
Owned	When companies use or develop their own channels to advertise	Web sites, Facebook fan pages and e-mail
Earned	If consumers share or create media that was designed by the company	Organic search, content share, ratings/reviews/rankings on community sites
Sold	Other marketers are invited to place their content on its owned media	Company sells space on their web site (i.e.: Google AdSense and affiliates´ network)
Hijacked	Those who oppose the company may hostage assets or campaigns	Negative comments on Social Media or creation and distribution of their own negative version of an online ad

Marketers can and should be able to control both paid and owned media. Earned media, however, allows companies to have publicity at no cost, since these refer to situations where sources external to the company promote it using their own channels. Only companies with a high level of quality and uniqueness can leverage earned media successfully. It is a good source of new ideas coming from customers and it usually generates buzz in a quickly and effective way (Edelman, 2010).

Sold media can be seen as new trend, which is still taking its first steps. If a specific website has a huge traffic, some companies might buy media space to place their ads: an e-commerce retailer, for instance, can sell ad space to its suppliers. In this particular case, the supplier has the opportunity to learn more about customer habits and behaviours, as well as increase traffic for their own site. Hijacked media is the opposite of earned media. Technological developments can also damage company's reputation and image. Nowadays, it is easier and quicker for an unpleased consumer to express his opinion about a negative experience. In

some extreme cases, hackers can either hijacked companies' Facebook pages or persuade others to boycott them (Edelman, 2010). The objective is to put the brand's or company's reputation at risk.

Two other relevant marketing concepts have been recently proposed to structure the digital marketing communication market: Inbound Marketing and Outbound Marketing (Table 2.3) (Governance, 2012). With inbound marketing, companies try to earn interest rather than buying it (Kindrachuk, 2013). For that purpose, marketing is required to be creative, informational and truly add value. When that happens, consumers will be more engaged with brands and companies.

Table 2.3 – The Inbound vs. the Outbound Marketing approach to digital marketing communications (Marketing Governance, 2012).

Inbound Marketing	*Outbound Marketing*
Two-away interactive communication	One-way communication
Search, referrals & social media pull customers	TV, radio & direct marketing push offers
Marketing adds more value	Marketing adds more costs
Marketers' main role is to educate & entertain	Marketers' main role is content creation
Blogs, social media, organic/paid search, opt-in database e-mail blast	Broadcasting, telemarketing, purchase database e-mail blast

Outbound strategies, on the other hand, are mainly related to traditional advertising media. According to Kindrachuk (2013), inbound marketing can be as much as 62% cheaper per lead than outbound marketing. Table 2.4 shows the associations between advertising media and these two opposing approaches to marketing communications.

Table 2.4 - Relationship between Inbound and Outbound Marketing, and online ad formats (Kindrachuk, 2013).

	Inbound	*Outbound*
Online media type	Earned media	Paid media
Features	Channels work together, visibility after efforts stop	Budget means traffic, individual channels optimization
Online ad format	SEO, Social Media, Referrals	Paid search, display ads, affiliates, TV, radio, print
Required resources	Content editor, online platforms, social media engagement	Financial capacity, campaign management and testing/optimization

As stated in the previous chapter, the aim of this dissertation is to compare the performance of online paid media channels, meaning that the focus is on paid media (without prejudice of recognising the importance of both owned and earned media). In this case, the performance and ROI of online channels were analysed according the agency perspective, which reinforces the need to focus on paid media. Within paid media, e-mail Marketing was chosen due to the fact of being used by the majority of companies (Laudon, 2013). Paid Search is the media where companies spend more money, both on Europe and US (Fennah, 2012). Finally, Social Network Ads show a rapidly growing (Nadaraja, n.d.), being a media with reduced costs and reach power (Nadaraja, n.d.).

Within paid media, the main focus of this dissertation is necessarily on outbound channels, as depicted in Table 2.4. Inbound and outbound marketing differ also in the allocation of costs – outbound marketing internalizes advertising costs, while inbound marketing externalizes ad costs to users.

2.2 Google Ad Words campaigns

Both organic and paid search use Search Engines, such as Google or Yahoo!, to display keyword search results to web users on search engine results pages (SERPs), and in this way leverage users' search activities for marketing communication purposes. Their main purposes and cost models are, however, very different from one from another.

Organic Search refers to naturally, or not influenced, results generated by web users' searches (Janssen, n.d.-a). The outcomes of this type of search result from applying an algorithm designed by the search provider to users' keyword search. The main objective here is to generate traffic by making sure that the website appears on the top positions of SERP. That is where search engine optimization (SEO), a group of search engine-based techniques used to improve sites' positions on SERP, comes into play (Strickland, n.d.). Advertisers may influence Organic Search through owned media, namely through the optimization of the content, keyword use and linking of their websites, social networked media pages, blogs, referrals and recommendations, among others.

AdWords refers to Google's Paid Search business. Every time a user search for specific keywords on the search engine, paid search ads are displayed that best match these keywords (Google, n.d.). However, not all ads commissioned are showed. Google has an auction bidding system to determine which ads will appear. According to Google, there is an auction every time an Ad is eligible to be showed on a SERP. The ads with the best matching rank will be displayed. Ad rank is determined by a combination of the ad quality score and

maximum CPC bid. Notice that even with a lower CPC, an ad might still be displayed, as long as its quality score is high. The auction is repeated for any search on Google, meaning that different outcomes are possible for the each auction (Google, n.d.). One of the main advantages of Paid Search campaigns is being able to quantify campaign profits by knowing the exact cost of acquiring a web site visitor versus the amount of time, money, attention or other relevant currency the visitor spent at the site. This is achieved by monitoring the number of ad viewers who click on the paid search ad and are carried through to the landing page of the advertiser, as well as by paying search engine firms on a per-click basis (Google, n.d.).

Revshare has only very recently recruited an employee certified by Google to manage its Paid Search ad campaigns and started to explore this media channel. As such, it does not have much historical data based on which current paid search campaigns can be optimized. In terms of structure, Revshare sets one account per client, divided by campaigns and type of ads. Campaigns are separated in accordance to keyword types – Generic, Brand and Competitors -, and typically have more than one Ad Group. Then, it necessary to choose the type of Network (Google Search and/or Display) – in these cases was launched on Google Search Network. With respect to keywords, all the available types are defined: "Ampla; Ampla Modificada, Correspondência de expressão e exata". The AdWords Keyword Planner tool is also often used, in the search for suggestions of helpful keywords. Furthermore, negative keywords for each campaign are also set by Revshare, based on their past performance. After creating the campaign, ad groups, the types of ads and keywords, it is necessary to establish the level of segmentation of the planned ads. The campaigns under the scope of this dissertation were only segmented by country, since they were exclusively launched in Portugal.

Paid search campaign budgets are defined by Revshare in advance, according with what was agreed with the client advertiser in advance. Budgeting takes campaign goals, typically performance-driven, into account. Campaigns conduced in Google AdWords are more targeted to consumers that are already searching for a specific product/service, rather than to the general announcement of a brand or offer, that is, to awareness or branding (Personal Communication, 2014). Initially, the biddings are set manually, with dynamic conversion optimizer systems only being used after having collected enough historical data on a particular ad campaign. In order to track the number of conversions generated by each paid search ad, it is necessary to have linked Revshare's Google Ad Words account with Google Analytics from the onset. A physical code is must be inserted in each Google add to be able to distinguish conversions per ad. Then, two parameters are defined in the page URL so that the

conversion is counted on the HasOffers platform. Campaign optimization is done on a daily basis, by adjusting bids, adding/removing ads or defining new negative keywords (Personal Communication, 2014).

2.3 Promotional e-mail marketing campaigns

For the purposes of this dissertation, promotional e-mail Marketing is defined as any electronic messages (E-mail) sent to a group of people (database) and carrying a promotional offer to incentivize recipients to click on the ad and navigate to a landing page, where a register form must be completed and submitted for the offer to be enjoyed (Personal Communication, 2014). It usual on e-mail marketing campaigns for Revshare to share the campaign with their affiliates. In other words, Revshare receives a campaign from the client advertiser and, in order to be able to generate the established number of leads, assign the campaign to affiliates.

The e-mail campaigns (message + landing page) under the scope of this dissertation were fully designed and programed by Revshare's own ad design department. When campaign design is finished, its html code is verified by the E-mail marketing department, to guarantee that there are no programming errors and to make sure that the tracking link is correct. Next, the E-mail campaign is configured on the E-Mail Service Provider (ESP)'s platform, by filling in several required fields, such as name of the campaign, the affiliate's identification, the offer identification, among others. Subsequently, a database of recipients for a particular country is selected – Revshare has proprietary databases for several countries -, and a sending schedule defined. It is standard procedure to send E-mails to the whole database employed in a particular campaign. Revshare's databases are not "re-targeted", meaning that it is not possible to identify database members according to their detailed personal profile or past buying behaviour. It is however possible to know how they have responded to previous E-mail in terms of open rate – in this sense it is an opt-in database.

Finally, the campaign plan is reviewed and approved by the head of the E-mail marketing department and the client advertiser, and launched in the scheduled date through the commissioned ESP platform (Personal Communication, 2014). Regarding the costs, there are no significant differences between owned (only Revshare) and shared (Revshare and affiliates) campaigns. Database and ESP costs are fixed on both cases. When the agency shares the campaign with the affiliates, they are paid according the number of leads that generated – the client pays a certain amount to Revshare, which gives a smaller payout to affiliates in order to keep a profitable margin (Personal Communication, 2014).

Immediately after, the ESP platform begins to provide daily metrics about campaign performance to enable campaign monitoring and optimization. Since Revshare operates under a performance-based pricing model, their client advertisers pay for promotional E-mail marketing campaign on a per lead conversion model (Personal Communication, 2014).

2.4 Facebook display ad campaigns

Facebook ads are online display ads appearing in Facebook users' pages, which are specifically targeted to their personal features and interests. Such targeting is possible due to the information that Facebook is able to collect about its users, not only about their socio-demographic characteristics, but also about their interests, geographical location and online "social" behaviour (Facebook, 2013).

Facebook ads are eligible for impression in many types of pages, like applications, photos or groups and are displayed on their right size, in columns, under the "Sponsored" header. Depending on the type of page, ad formats can be either horizontal or vertical (Facebook, 2013). Ad content can be further associated with social actions – putting a "Like" on a friends' page. There are three visible parts on the ads – title (maximum of 25 characters), body copy (maximum of 135 characters) and image (Facebook resizes larger images), and one that is not displayed – the hyperlink to the landing page (Anonymous, n.d.-b).

Differently from Google Ad Words, it is not possible to choose keywords. Facebook ads can be paid either per ad impression or per ad click (Facebook, 2013). However, the bidding system is also via auction, based on both CPC and CTR – keywords and landing page relevance do not influence the outcome (Personal Communication, 2014).

Leveraging social media ad campaigns requires advertisers and agencies to know the size of particular audiences, its growth rate, the amount of traffic being driven by social media to advertisers' websites, and how many leads and sales are being generated from it. Typically, by just listening to social media audiences and monitoring their evolution, opportunities for engagement and/or conversion can be spotted (Vaughan, 2012).

Revshare has one Facebook Ads account divided by Ad Sets (these are similar to ad groups in Google Ad Words), which correspond to different segments of Facebook users. Ads are typically segmented according to campaign goals and target market, using information about user location, general information (i.e.: education background, recent events), gender, age, native language, interests (i.e.: pages liked), recent purchases and browsing behavior (through

the use of cookies[1] – from Revshare) (Personal Communication, 2014). Each Ad Set is also composed by different ads. It is common practice to test more than one ad version within the same segment by use A/B testing procedures (Laja, 2013), to understand which version has the potential to generate higher conversion rates.

Being a performance-based digital agency, Revshare purchases Facebook Ads on CPC and sells them to advertisers on CPL. Campaign optimization is done at Ad Set level, by "turning on" ads with high conversion rates while pausing those with low ones. In order to link the ads back to Revshare offer id and affiliate id codes bust be defined per ad at the Facebook Ads' platform. For Revshare to be able to monitor campaign metrics, still more codes are necessary, such as traffic source, pricing model, Ad Set name, ad content and segmentation. The final goal of this agency is to be able create evermore segmented Ad Sets and optimize ad targeting continuously (Personal Communication, 2014).

2.5 Metrics used to evaluate online advertising performance

Several metrics can be used to evaluate the success of a given online advertising channel. The choice of the appropriate metrics to apply is highly dependent on the goals and type of media selected for a particular campaign.

Online advertising campaigns can serve a multitude of strategic goals, like increase the targeted traffic to a website, grow sales, became a trusted source of information, augment online visibility, establish a company in Social Media or branding (Ivkovic, 2010). Both branding (awareness) and performance-based metrics can thus be employed to analyse advertising effectiveness, depending on campaign objectives. Companies perform branding campaigns with the objective of establishing and maintaining a link between themselves and clients over time (Lofgren, n.d.). Instead, performance-based campaigns are focused on eliciting an immediate action from viewers. Metrics for branding features like engagement or loyalty are hence harder to define than those assessing performance, which can simply be a measure of the leads or sales conversions achieved by a particular ad.

Table 2.5 depicts the correspondence between some relevant online ad metrics and the media channel to which they best apply. A detailed list of online advertising metrics is depicted in Annex 2.

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[1] Data saved by the Internet browser that was genearted by a website visited by the user (TechTerms, 2011).

Table 2.5 – Metrics of online media channels, (Vaughan, 2012).

E-mail Marketing	Social Media	Paid Search
Bounce rates	Audience	Impressions
Deliver rates	Engagement	Number of clicks
Sharing/forwarding rates	Traffic generated	
CTR		
Conversion Rate		

ESP platforms provide campaign metrics like open rates, bounce rates, CTR and heat maps on a daily basis. Bounce rates help discover whether an E-mail list contains a high number of invalid addresses (Vaughan, 2012). E-mail bounces can be divided further into two categories: *soft bounces* - which result from a temporary problem with a valid E-mail address -, and *hard bounces* – which occur when an E-mail address is no longer valid, has closed or is non-existent. E-mail addresses that "bounce hard" should be removed from E-mail lists because Internet service providers use this metric to determine E-mail senders' (that is, the advertisers or agencies) reputation. Ideally, E-mail delivery rates should be maintained at above 95%, which implies the constant minimization of bounce rates. E-mail subject line and content, on the other hand, have an effect not only on ad performance, but also on staying out of spam E-mail lists (Vaughan, 2012). Importantly, both open rates and unsubscribe rates may not be reliable metrics to evaluate E-mail marketing campaigns. For instance, if an E-mail recipient has image blocking software installed, or is not willing to go through the un-subscription process but rather keeps on deleting E-mails upon their arrival, open and unsubscribing rates will portray an inaccurate picture of campaign performance.

Important Social Media metrics are the size of audiences, its growth rate, the traffic driven by social media to advertisers' websites, and how many leads and sales are being generated from it. Typically, by just listening to social media audiences and monitoring their evolution, opportunities for engagement and/or conversion can be quickly spotted (Vaughan, 2012).

The number of users clicking on an ad after its impression is a very important metric to determine the quality, effectiveness and efficiency of an online ad. CTR, that is, the ratio of user clicks to ad exposure, or impressions (Vaughan, 2012), is a performance metric originated in the search engine advertising marketing, but which is applied today to practically all kinds of online advertising formats. To increase this rate, specific search keywords on websites or landing pages, as well as other content and design features of headlines or copy can be manipulated until an optimal combination is reached. Landing pages,

in particular, typically carry a form with the intent of capturing visitors' information (e.g., e-mail address, phone number, demographics) for future ad campaigns or lead contacts, in exchange for some reward or incentive (Eridon, 2013). It is important to notice that distribution of CTR values during promotional E-mail marketing campaigns typically exhibit a "long-tail" phenomenon. About 90% of campaign clicks occur in the first 3 days of the campaign, after which CTR values become progressively residual (Personal Communication, 2014). Heat maps are a two-dimensional representation of input data, with values being displayed by colours (Rouse, 2011). In this particular case, heat maps show where consumers have clicked respecting the message receive. It is a visual representation of the total CTR, divided by the several sections of the e-mail (Personal Communication, 2014).

Sharing and forwarding rates allow us to determine the quality of the e-mail content – if a person shares or forwards the e-mail message a lot, the content is relevant. It helps getting a higher number of impressions – and may lead to an increase in terms of clicks, which influences the CTR (Vaughan, 2012).

Conversion rates are the ultimate measure of effectiveness for advertisers and performance-based agencies alike, as they enable managers in both these organizations to better estimate the performance and profitability of ad campaigns. The number of form fields and the type of information landing pages ask from users in exchange for the promised offer can vary widely, with both factors having a great influence on lead conversion rates and campaign performance (Eridon, 2013).

ESP platforms allow monitoring the e-mail campaigns. However, once the e-mails are sent, it is not possible to optimize it (only if a second blast is send). The level of details about campaign's metrics varies from platform to platform – i.e.: Doctor Sender displays the open rate, CTR, bounce and unsubscribe rate (Personal Communication, 2014).

2.6 Players and pricing models in the online advertising industry

The online advertising industry is currently organized around three major types of players – the advertisers, the publishers and the affiliates (Figure 2.1) –, and their inter-relationships (Asdemir, 2012). In the most common form of transaction, a client advertiser hires the digital services of a marketing agency to run an ad campaign. If the agency does not have a large enough inventory of online ad placement space or databases, it can try to procure it by contracting further ad space for the campaign in their network of affiliates. Finally, a digital agency may also be hired via another agency – in this case, the agency itself is considered an affiliate (Personal Communication, 2014).
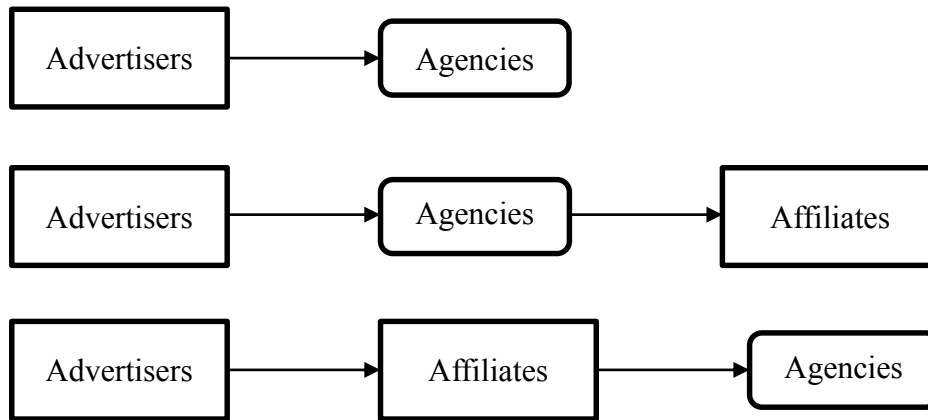
Figure 2.1 - Main players in the online advertising industry and their inter-relationships, (Personal Communication, 2014).

It is usual for advertisers to run campaigns on multiple websites and formats, and to employ different pricing models depending on the goal in question. The first web advertising pricing model was a flat fee one, which consisted of paying a fixed price for the display of ads for a certain period of time in a website (Novak, 2000). In this case, however, there was no guarantee that web users would actually see the ad, which made it very difficult to ascertain its effectiveness. In view of this, two major pricing models have evolved within the online advertising industry: the exposure or pay-per-view/impression model (*aka* CPM model)-paralleling the pricing model of traditional offline advertising -, and the performance or pay-per-click/action model (*aka* CPA model), which was pioneered by search engine companies, namely Google (Fjell, 2010, Novak, 2000).

The CPM model is one of the earliest and most often used online ad pricing models. In it, the publisher receives a payment every time an ad is displayed, that is, per impression, in a model which is quite similar to that practiced in traditional media (Novak, 2000, Asdemir, 2012). Nevertheless, like in the flat fee model, the CPC model also does not ensure that web users actually notice ads, and there is no further interaction between the advertiser and consumers (Hu, 2004). Yet, many publishers prefer still prefer to work with CPM models due to their low financial low risk. Also, they state that in this way they cannot be held responsible for advertisement design or attractiveness (Hu, 2004). CPM is thus typically employed by larger advertisers on branding campaigns, mainly because it is cheaper to attract large audiences of consumers based on impressions. Also, social media allowed for the recent the re-born of CPM models (Asdemir, 2012).

Internet's unique possibilities for interactivity (Novak, 2000) and the development of search engine marketing, namely Google Search, enabled the emergence of performance-based models, which are quite different from the CPM ones described above. According to some authors (Mahdian, 2009, Hu, 2004), performance models should be sub-divided into pay-per-click (CPC model) and pay-per-action or conversion models (CPA model), where action refers to lead generation (CPL model), registration (CPR model) or actual purchases (CPP model). In the CPC model, advertisers only pay for an ad exposure if web users actually click on it. Nevertheless, it is dangerous to rely solely on models that appeal mostly to large and homogeneous audiences, and offer little to no opportunity for interactivity and re-targeting, such as CPM. Importantly, their metrics are only able to provide the number of web users exposed to an ad, which may have little significance to the advertisers that are paying for that space (Novak, 2000).

CPC and CPA models are relatively similar. While in the former, the advertiser pays for each ad click, in the latter payment is due solely for each action undertaken by the online user that accrues actual value to the advertiser, like making a purchase, filling out a registration form or generating a lead (Hu, 2004, Asdemir, 2012). Another important difference between this model and CPM/CPC models is that the final action happens outside the publishers' control. Moreover, the time between events is also quite different: an impression or a click may take place right after the user requests a page, while an action may occur only some days or even weeks after ad exposure (Mahdian, 2009).

As earlier stated, Google Ad Words' campaigns at Revshare are paid based on the number of clicks. E-mail Marketing affiliates' remunerations are, on the other hand, based on whichever pricing model was established between the agency and the advertiser for a particular campaign. Meanwhile, Facebook offers two distinct ad-pricing models, CPC and CPM, with CPM being more used when the campaign objective is to generate brand awareness and/or engagement and CPC when campaigns are more focused on achieving conversions or sales (Personal Communication, 2014).

Advertisers should prefer to work with conversion-based models, since these imply that ad payment is entirely dependent on ad performance, that is, on the ability of the ad to generate revenues for the advertising company (Mahdian, 2009). However, the recent phenomenon of consumers searching online but buying offline – ROPO (Görtz, 2011), makes it is more difficult to attribute to each channel the real value generated. To compound the attribution problem further, online media can also be used by advertisers and online advertising networks (e.g., Google's Double Click) for retargeting (also called remarketing) purposes. This format

uses a cookie-based technology that anonymously tracks audiences while they are online at the advertiser's or one of its affiliates' websites (Anonymous, 2013c). Retargeting works best when combined with inbound marketing, for instance, by using Display Ads (Facebook Ads) and Paid Search Ads (Ad Words) in tandem. Since this tactic drives traffic to a website/landing page, advertisers and agencies may use it in order to obtain registrations, with the objective of creating a segmented database of (potential) E-mail recipients (Personal Communication, 2014).

Overall, advertisers are more and more demanding ad deals that do not rely solely on impressions, as these as not as targeted, as accountable and as effective as performance-based models (Dellarocas, 2009). It is thus increasingly vital for advertisers' marketing managers to be able measure their return on ad investment by knowing the incremental increase on sales resulting from ad placement. Web analytics play thus a crucial role in tracking online data generated by consumers and helping to improve and optimize online ad campaign strategy (Braun, 2013). There are several web analytics platforms in use by online advertising industry players – e.g., Google Analytics and GetClick (Lusk, 2012). Some offer a free version, while others are only available at a premium, being charged on a monthly or annual fee. Both these online platforms allow managers to know costs and revenues generated by service, campaign or traffic source.

2.7 Media channel performance benchmarks for the online advertising industry

2.7.1 Google Ad Words

CTR values for Google's paid search ads are highly dependent on the advertiser's industry, competition for keyword buying and campaign goal (Personal Communication, 2014). Ad rankings on SERP, in turn, are a function of the CPC bid (the maximum amount a firm is willing to pay for the ad) and Google's ad quality score (Google's own rating of the quality of a paid search ad) (Personal Communication, 2014). There seems also to be a close relationship between campaign CTR and ad rank-order or position, with top positions having generally higher CTR, but lower conversion rates and revenues, than lower rankings. So, there is hardly a consensus among online ad market players about what is then a good or fair CTR value for a Google Ad Words' campaign (Mitchell, 2014). A Google's former employee was quoted as having said that 2% is the reference point for an average CTR, while other sources point at CTR values of around 3% (McCollum, 2010). Accordingly, it seems that advertisers are generally satisfied with CTR values between 2% and 5% (Kim, 2014).

Advertisers and agencies currently engage in fierce bidding wars at Google Ad Words to compete for top ad positions in SERPs (Agarwal et al., 2011), with single keyword costs allegedly ranging from a few cents to a hundreds of Euros depending on their popularity (Agarwal et al., 2011). Advertiser industry, type of offer, country and keyword performance factors also impact paid search costs, making it nearly impossible to get estimates about average campaign costs in general (Personal Communication, 2014). Regarding Revshare's paid search activities, it was possible to learn that average CPC values paid for single keywords, in Google AdWords' campaigns launched in the first quarter of 2014 in Portugal, varied between ca. €0,49 and €1,44

2.7.2 Promotional e-mail marketing

Table 2.6 presents some of the variables known to affect the performance of promotional E-mail marketing campaigns (Vaughan, 2012).

Table 2.6 – Variables that influence E-mail Marketing Performance (Vaughan, 2012).

Content	Design	Others
Headlines	Bolding	Sender's name/address
Placement of content	Capitalization	Subject Line
Call to action button	Font Size	Timing
Type of content	Font colours	
Placement of social media links	Images	
Number of images	HTML versus Plain text E-mails	
Number of links		
Length of E-mail		

Other important determinants of promotional email effectiveness are the type and size of the address databases employed, as well as their level of segmentation *(HubSpot, 2011. 5 Email testing Best Practices*; Personal Communication, 2014).

The average global conversion rate registered for promotional E-mail messages in the second quarter of 2013, across industries, was 3,34% (Nanji, 2013). Table 2.7 displays the average values of some other important performance metrics for this channel in 2013, in three of the industries studied in this dissertation. According to these values, email open rates do not seem to vary considerably across industries, while CTR values seem to be highly dependent on this factor. Several factors like the type of offer, the quality of the databases employed and the

level of expertise in email message design and email campaign management may explain this differences.

Table 2.7 – Mailchimp's US E-mail open rates and CTR benchmarks for the retail, security and insurance industries in 2013 (Anonymous, 2013a).

Industry	E-mail Open rate	E-mail CTR
Retail	23%	3%
Security	26%	4%
Insurances	20%	2%

Table 2.8 depicts average, industry total, E-mail open rates and CTR values registered in some European Union (EU) countries in 2014. Both appear to be rather homogeneous across country markets.

Table 2.8 – EU industry total E-mail open rates and CTR benchmarks in 2014 (Chaffey, 2014).

Country	Open rate	CTR
France	21%	6%
Germany	21%	6%
UK	20%	6%

According to Revshare, while the open rate benchmarks depicted in Tables 2.7 and 2.8 are higher than those currently observed in the Portuguese market, the CTR values are well aligned with local averages (Personal Communication, 2014). The discrepancy observed in open rates could be due to the quality of locally available databases, particularly in what respects their level of segmentation, as well as to the campaign schedules currently favoured by advertisers.

There is little or no data available on the average performance metrics of promotional E-mail marketing campaigns ran in the Portuguese B2C market. Since its start in the second semester of 2013, Revshare has executed e-mail marketing campaigns mainly for the banking, automobile, telecommunications, healthcare services and retail industries. To be able to set some form of benchmark that could serve the purposes of this dissertation, open rate and CTR values registered at Revshare's E-mail marketing platform (Doctor Sender) were compiled and are depicted in Table 2.9. These values show a much lower open rate, but also a much higher CTR for Revshare's campaigns in comparison to international benchmarks.

Table 2.9 – Revshare's open rate (n=27) and CTR (n=83) averages for promotional E-mail Marketing campaigns ran in the Portuguese B2C market between January 2013 and April 2014 (Personal Communication, 2014).

	Open Rate (n=27)	CTR (n=83)
	Mean ± Std Min-Max	Mean± Std Min-Max
2013 January - December	4.1% ± 2.23 [1,85%-14%]	13,29% ± 9,55 [1,93%-36,39%]
2014 January - April	4,68% ± 3.00 [0,14%-16,64%]	11,1% ±7,71 [1,74%-42,29%]

According to Revshare, the low open rates were due to the initial quality of their E-mail address database, which had many inactive or invalid entries. Meanwhile, they have started a process to clean and optimize the database, which should lead open rates to steadily increase during 2014. Additionally, Revshare is also using other online ad campaigns to capture new contacts, with the goal of creating new and up-to-date subscriber lists. The high CTR value registered, on the other hand, are mainly attributed to the fact that this agency controls the development and design of the majority of e-mail messages and landing pages commissioned by advertisers (Personal Communication, 2014). In this way, Revshare is able to control some of the most important drivers of promotional E-mail marketing performance, such as the number and position of images and words in the message, the presence of a call-to-action button, among other E-mail design features (Vaughan, 2012).

Little is publicly known about the average costs of E-mail marketing campaigns, other that they are dependent on the use of an ESP and the monthly volume of messages sent. External According to Revshare, external ESPs usually charge their services per 1000 E-mails sent, at between €0,19 and €0,32 per thousand. ESPs with higher delivery rates typically charge higher prices for their services (Personal Communication, 2014).

2.7.3 Facebook ads

Table 2.10 displays the average values of some of the important metrics used to evaluate the performance of Facebook display ads in 2012, in Portugal, UK and US ad markets.

Table 2.10 - Facebook ads CTR and CPC values by country, in 2012 (Anonymous, 2013b).

Industry/Country	CTR	CPC
Portugal	0,38%	0,07€
UK	0,33%	0,26€
US	0,17%	0,18€

Facebook ads appear to have very low CTR values, which may be explained by the pre-disposition of consumers of not paying attention to display ads when surfing the social media networks. Moreover, many agencies do yet not know how to segment social media audiences and hence properly targeted social network campaigns (Personal Communication, 2014).

2.8 The development of the online advertising industry

Internet is now considered the fastest-growing communication medium, with a growth rate of 528,1% from 2000 to 2011 (Internetworldstats, 2012). A recent study (eMarketer, 2012) indicatesd that, for the first time, the amount of money spent on digital advertising in the US in 2011 was larger than that spent on printed media, a development that is set to rapidly occur in other parts of the world as well. However, it took some time until online advertising reached its current level of relevance and omnipresence in our lives.

The first ever online ad registered was a banner ad for AT&T, a US telecommunication company, launched on October 27, 1994 in the *HotWired* website (Kaye, 2001). Initially, most online advertising was elementary not only in terms of the advertising message itself, but also in the way it was sold. In the early days, advertisers paid just to have a smaller banner located on a website for a given period of time. Web analytical tools were not advanced yet and therefore advertisers had to rely solely on website visitor statistics. This means that back then, online and print advertising were not so different.

More recent developments in tracking technologies would come to enable several improvements in online advertising management (Anonymous, n.d.-a). In the mid-90's, some ad serving software emerged empowering better ad tracking. This meant that it was now possible to keep track of the number of surfers who viewed an ad (that is, of online ad impressions). Moreover, multiple banner ads could now rotate in the same space on a webpage, making it easier to specify campaigns timings and limit the number of impressions. Thanks to these technological improvements, the difference between online and offline advertising began to grow.

In the late 90's, some more important changes occurred in the online advertising world. For instance, banner ad size was standardized across platforms. This made it easier for publishers and advertisers to manage, since they did not need to constantly design new ads anymore. Metrics and selling methods also became more common, being now usual for publishers to offer CPM, CPC (the company pays per ad click) or any combination of both types of pricing models (Kaye, 2001).

On the web user's side, however, and once the novelty of online display advertising passed, many consumers started ignoring it. This was due to the fact that was still little to none ad targeting to speak of. Moreover, online display ads start to be seen as highly intrusive, with web users running software with the sole objective of blocking such ad messages. In view of this, ad networks were then created with the goal of better matching up advertisers with publishers, and thereby taking a percentage of ad revenue (Kaye, 2001). Doubleclick, created by Google, is an example of an ad network, which allows creating, transacting and managing online advertising. Publishers, Advertisers and Agencies benefit from it – the first ones are offered a complete ad revenue engine; Advertisers and Agencies have a digital ad management platform. A real time marketplace connects all agents involved (Google, 2014).

The display ad industry never stopped evolving until today and it is still undergoing several important transformations. Currently, the biggest challenge for online advertisers is how to increase viewers' attention to ads. In view of this, static images are being more and more replaced by larger and animated banner ads and videos. Recent technologies, such as Flash, allow higher ad quality and the introduction of interactive design features. The primarily goal is to mimic TV advertising to online, where consumers are not free to switch off the ads unless they change channels. Issues like intrusion started to arise again among the online community (Kaye, 2001).

Meanwhile, companies like Google and Overture initiated their own new trends within the online advertising market. They introduced an innovative, performance-based advertising business model coined as Pay-per-Click ads, which relied on a complex ad space auction bidding mechanism (Vaughan, 2012). This kind of advertising model offered more relevant offer information to users because its ads were shown according to consumers' keyword searches performed in search engines (Anonymous, n.d.-a). Nowadays, search ad servers are able to *geotargeting* specific campaigns to individual users. Many variables can be used – city, state, country, region, designated market area, ZIP code, radius around a point and location extension targeting (Raehsler, 2013). However, other techniques may be used in

order to improve ROI, such as exclude a location, bid adjustment by location and geo targeting a specific area with specific keywords.

2.9 Traditional (offline) vs. online advertising

The Internet allows endless opportunities for new ad formats, broader audiences, cost reduction and optimization of ad performance, far beyond those of enabled by traditional media. Table 2.11 illustrates the main differences observed between traditional and online advertising.

Table 2.11 - Differences between traditional and online advertising (Abraham, 2010).

	Traditional	*Online*
Cost	More expensive	Cheaper
Tracking options	Not possible	Possible
Measure performance	Very Difficult	Several tools can be used
Learn consumer behavior	Very limited	Easy (i.e.: through IP)
Customization	Mass production	Different ads according target
Co-creation of value	Very hard	Possible
Reach, speed and flexibility	Almost to entire population, fast but not flexible	Very broad, fast and flexible

Companies increasingly recognize the power of Internet as a platform for co-creating value with customers. Internet increases interactivity, enhances reach, speed and flexibility, which suggest that companies are better equipped to engage consumers (Chao, 2012). However, in order to grow, online advertising still depends heavily on the development of e-commerce on one hand, and how it is able to meet advertisers', publishers' and consumers' expectations and habits, on the other (Li, 2004). To this end, the prevalence of a consumer behaviour phenomenon known as ROPO - Research Online Purchase Offline - was investigated (Görtz, 2011) in the context of a partnership between Google and the apparel industry. Their study concluded that for every 100 online redeemed coupons, additional 51 coupons were redeemed offline, after online search. Moreover, for every €1 of online sales, extra €0,93 offline revenues was generated. This illustrates the prevalence of ROPO in consumer behaviour and

highlights the difficulties of exactly attributing costs and revenues to the actual ad media driving traffic and sales conversions.

Another important difference between online and offline advertising is related to the possibility of learning from consumers' behaviour in response to ads. If companies are able to track the users' IP addresses, there is also the possibility of matching peoples' searches with individual or household details, Ad Networks and companies' databases. Furthermore, if a person is registered in a specific website, personal information can be used to target advertising more accurately, enhancing Customer Relationship Management. Additionally, online inventory can be both selected in real time and customized for a given viewers, something which was not previously possible with offline ad media.

Online advertising also maximizes the efficiency of matching offer buyers and sellers, decreasing the importance of sales intermediaries. Companies are encouraged to copy offline contents to the online channels mainly because consumers are moving in such direction and potential profits are high. However, television and radio may fight this tendency by offering the same services via Internet – for example, cars are becoming to be equipped with Internet access (Evans, 2009).

Automated advertising networks pose further challenges for traditional media companies, namely in what respect the allocation of advertising budgets to different media. Media planning is a mass media concept imported from traditional advertising, where media buyers try to anticipate TV and Press audiences that will occur several months later. With advertising networks such as Double Click and automated ad and audience tracking tools, however, advertisements can now be highly targeted - or better yet, re-targeted dynamically – based on users' past behaviour, location, previous searches, demographics, past advertising responses, etc. The only thing that needs thus to be planned is in what context and to what individual an ad needs to be placed. Marketers hence no longer decide beforehand what the target audience, message and media placement will be. Instead, they decide when to execute what depending on current information about ad viewing, ad conversion and buying patterns, and constantly optimize their messages, their targeting and the use of their ad budget accordingly (Mulhern, 2009). The problem is that, in the past, advertising agencies have constructed sophisticated infrastructures to send messages to large audiences through traditional broadcast media, but developed very few mechanisms to track audience responses to their ads. Hence, they mostly do not have the mentality or technical experience to fully control the "big data" generating by tracking responses to online ads. This has paved that way for the recent emergence of fully integrated, pure digital online advertising agencies.

Traditional advertisers focused on aggregating and delivering messages to large audiences, that is, on broadcasting. Mass production and mass communication rely heavily on brand awareness, distribution and aggressive promotions. On the other hand, narrowcasting is set to target individual consumers directly. The aim here is hence to share information with a selected audience (Group, 2012). Table 2.12 illustrates further these differences by depicting some figures regarding narrow and broadcasting marketing communication performance.

Table 2.12 - Narrowcasting vs. Broadcasting (Media Group, 2012).

	Narrowcasting	*Broadcasting*
Reach	98% of all SMS messages are opened	88% of e-mails are not open and 84% of Facebook stories are not viewed
Frequency	6.4 billion messages are sent per day	300 million photos are uploaded to Facebook
Engagement	People look at their phones 150 times per day	57% of people look less than 4 times a day their e-mail

News, media advertising and entertainment are becoming more and more bundled together for online audiences. Accordingly, online advertising has currently its focus on search, spiders, social networks and algorithms that filter and customize messages. Meanwhile, media content is increasingly freer of physical constraints, which means that it can be copied and shared over and over again with minimal marginal costs and loss of quality (Mulhern, 2009). Some authors (Gal-Or, 2005) believe that, in a not so distant future, media content will be customized by users and no longer by agencies or media empires. Marketers must thus begin to learn how to participate in an information-empowered consumer world by generating content themselves. Their objective must become more to serve users with relevant information and services at an individual level, than to try to push offers to them. Besides, consumers are not willing to pay for information they can obtain for free, which implies that companies, agencies and publishers should offer trustful and authentic content (Mulhern, 2009).

Despite all differences and potential advantages of digital marketing, traditional media still have a strong appeal and have proved to be more effective than online ads when measuring the impact of campaigns on purchase intentions (Danaher, 2013).

2.10 Budgeting digital advertising

Few studies have looked at how advertisers allocate their campaign budgets between different channels (Silk, 2001). However, it is well-know that many base their decisions according to

formal or informal analyses of the returns on advertising investments (Duboff, 2007). But there seem to be many other variables that affect budget allocation, such as new product launches, new versions, and specific campaign goals, among others (Kenshoo, 2013).

Advertising budget allocation has always had two competing orientations: the short and the long term. On one hand, offline advertising, like television, can be more long-term oriented, that is, more about planning budget allocation right from the start. With this type of approach, it takes time to create assets and be able to negotiate good deals. On the other hand, the short term in digital marketing can be seen as a synonym of optimization. Some types of online ads, such as paid search, concentrate thus their efforts on performance. Ad placement deals are done more rapidly and ad reallocation is a highly dynamic process – as competitors also keep changing their programs and strategies (Kenshoo, 2013).

Generally speaking, the annual budget establishes the overall media selection and media planning, with individual media planners setting the details for the individual campaigns. Goal prioritization is the key to be able to accurately measure campaign performance.

There are two additional factors to considerer when allocating the budget: internal and external. Internal factors are related to variables inside the company – new product/service launches, new assets/resources, promotions and changes in teams or in the business environment. However, there also important external factors that are not so easily controlled by companies, such as seasonality, consumer trends, industry changes/competitors and global or regional influencers (Kenshoo, 2013).

To conclude, the following rule about ad budget allocation in the digital age has been recently put forward (Kenshoo, 2013): companies should spend 70% of their advertising budget on the channels that have served them well so far, 20% in investments in new channels and media innovations and 10% on experiments with different ad formats, messages and channels.

2.11 Integrating offline and online advertising media

In order to be coherent and let consumers form a consistent opinion about a brand, it is important for marketers to send homogenous messages throughout all touch points (Belch, 2004). The concept of Integrated Marketing Communications (IMC) is thus becoming more important in today's advertising environment (Taylor, 2010). Advertisers should include IMC concept throughout their campaign planning process. Marketing managers have nevertheless some difficulties in measuring multiple channels results, which may lead to double counting

or disproportional attribution of conversions. It is thus common to measure across-channels results using separate tracking systems (Green and Estis, 2008).

Multichannel marketing can be defined as the process of simultaneously providing goods, services and information to customer through at least two synchronized media channels (Rangaswamy and Bruggen, A., 2005). Television and Web advertising, for instance, are usually combined on advertising campaigns, due to important synergies. Both have unique features that are absent in the counterpart. For example, web advertising will activate and associate visual and audio memories in consumers after they saw the commercial on TV (Chang, 2004). Previous research (Assael, 2011, Naik, 2003, Naik, 2009) also concluded that advertising in one media could influence ad effectiveness in another one – cross-channel ad effects. Such results can be partially explained by prior studies on ad effectiveness, like the enhancement of processing and improvement of memory performance (Edell, 1999), how multiple sources influence credibility (Petty, 1986) and multiple communication vehicles effects (Caywood, 1991, Pechmann and Cornelia and Stewart, 1988).

The winning combination between offline and online channels will in any case depend highly on the nature and objectives of each ad campaign (Evans, 2009).

Table 2.13 summarizes the main studies conducted on multi-channel advertising and their findings. It has been shown that customer behaviour is affected by touch point, that is, customers behave differently in response to exposures of the same ad in different media channels (Kushwaha, 2013).This led to the conclusion that, on average, a multi-channel customers is more valuable in monetary terms than a single-channel customer, with product category moderating the relationship between customer channel preference and monetary value.

Analysing the effectiveness of using both channels in the same campaign, Danaher and Dagger (2013) have done an extremely thorough study, by using a loyalty program database combined with TV, radio, newspaper, magazine, online display ad, sponsored search, social media, catalog, direct mail and e-mail marketing. The authors have concluded that catalogues, television and direct mail have a strong influence on sales and profits. In terms of online media, e-mail marketing and sponsored search impact significantly purchase outcomes. On the other hand, display ad and social media increase traffic to companies' websites. Despite display ads reaching 61% of respondents, only 7% recalled having seen them, which can be converted to an exposure rate of 11%. On the contrary, offline media, like TV and newspaper, had exposure rates of 60% and 53%. Overall, purchase intentions among consumers increased by 11%, and profits by around 20%, taking into consideration all channels.

Table 2.13 – Evolution regarding the integration of online and offline channels.

Studies	Findings
Briggs (2005)	Companies are using proactive communication strategies to engage customers using multiple channels
Naik (2003 and 2009) and Assel (2011)	Advertising in one media influence the effectiveness in other media
Lewis (2008) and Dinner (2011)	Online channels influence offline sales
Kushwaha (2013)	A multi-channel customers is more valuable, in monetary terms, than a single-channel customer
Laroche (2013) and Karimova (2011)	Combining TV with online media is a trend
Danaher and Dagger (2013)	Catalogues and direct mail influence sales, while e-mail and sponsored search affects the purchase outcome. Display and social media drive traffic to website

Currently, it is possible to observe a change from passive communication strategies to more proactive ones, where consumers are engaged through multiple channels simultaneously (Briggs, 2005). The main reason behind it is the fact that the more a consumer is exposed to the same message, the better. By exposing the consumer to the same message in multiple channels, the manager is increasing both the reach – meaning that different segments are exposed to the same ad in different channels, accordingly to their preferences, and frequency exposure – the same channel is not saturated and it costs less to companies also using online media. Therefore, advertisers ought to better understand how digital and traditional advertising influence sales within and across channels, because it is not possible to fully account for the total impact of advertising by solely measuring single channel effects.

2.12 The Portuguese online advertising market

Given that scope of this dissertation lies in the Portuguese online advertising industry, it is necessary to understand first how this market works and how it differs from the US market, where most of the previous studies on online ad performance were conducted.

The Portuguese market is one of the smallest advertising markets in value and volume in Europe (PwC, 2013). However, online advertising appears to be ready to grow both in terms of volume and market share, even if highly constrained by current economic conditions (PwC, 2013). In 2012, the Portuguese online ad market reached 22,66 € million in revenues, with Search Engine Marketing s accounting for 57% of the market share (PwC, 2013). Table 2.14 shows that the top national advertisers were responsible for 25,8% of total advertising investment on TV, Cinema, Outdoors, Internet, Press and Radio in 2013. Investments were

the highest on TV (72%), Press (10,8%) and Internet (7,2%) advertising (MediaMonitor, 2014a).

Table 2.14 -Percentage of the marketing budget allocated to different types of media in Portugal in 2013 (MediaMonitor, 2014b).

Media	% of budget allocated
TV	86,1%
Internet	7,5%
Outdoors	2,5%
Press	2,3%
Radio	1,4%
Cinema	0,1%

During the first months of 2014, this tendency seems to have continued, with the top twenty advertisers accounting for about 46 of total advertising investment. In global terms, TV accounted for 75% of total investment, Press captured 9,5% and Internet 6,6% (MediaMonitor, 2014b).

The national online ad market is expected to know a moderate growth until 2017, when ad revenues are expected to reach 39 € million. Facebook and Google Display Networks should boost the growth of the Portuguese market. Additionally, mobile advertising is also expected to increase from 1 € million in 2012 to 2 € million in the next three years (PwC, 2013).

Several online advertisement cost models are currently employed in Portugal, such as CPM, CPC, CPL, Sales and Hybrid models, which are a combination of the previous ones. Simultaneously, several types of ad formats are being employed. The most used are Search Engines, E-mail Marketing and Display ads (M-Rec, Takeovers and Videos Pre-Roll. Nevertheless, it is also possible to find other formats like Leaderboard, Layer, Skyscraper, Expandable M-Rec and Wallpaper.

According to Ana Marcela, who currently works at Meios & Publicidade, M-Rec keeps very interesting efficacy rates, which lead to higher demand for such format (Marcela, 2010). Furthermore, this format is more qualified than rich media and does not perturb so much the reader. Standard formats are still pretty common, mainly because agencies continue to have some difficulties creating customized images. The M-Rec (300x250) is the most used format because it can be easily adapted to several ways of communication. On the other hand, agencies and publishers are offering and demanding out-of-the-box formats and solutions. Rich media, sponsorship and *gamification* can be part of an integrated strategy to engage multi-platforms, including web, mobile and games (Marcela, 2010).

Prior to February 2009, the Portuguese market was totally dependent of Google in what concerns contextual advertising. This was the trigger for the creation of a contextual advertising network, belonging to Sapo's team, by five major Portuguese groups – Cofina, Controlinvest, Imprensa, Media Capital and Sonaecom (Marcela, 2010).

Revshare was founded in 2012. Currently, the agency operates not only domestically but also internationally – Brazil and Spain. In Portugal, the overall results have been quite positive – according to one of their members, profit is made since the first month of activity. Moreover, the profit generated is always used to reinvest in the company. It generates around €1 million revenues annually, with a taskforce of 15 employees. Regarding their clients, the major Portuguese client is Gupo HavasMedia. Netaffiliation, Hifficiency and Netlucro are the main competitor within this industry. Revshare is currently the second largest digital marketing agency in Portugal, with a 35% market share.

2.13 Conclusions

It is a fact that online advertising has been evolving throughout time, being considered a growing tendency (Internetworldstats, 2012). Marketing Managers are focusing their efforts and budget into online media (eMarketer, 2012). Technological developments allow creating new formats of advertising.

The digital advertising world is armed with new weapons that offline media cannot offer. Tracking options, measurement tools and targeted ads are some examples - the concept of advertising for mass media is no longer the core issue. Additionally, planning ahead the whole campaign is being substituted by just deciding when to execute ads (Kenshoo, 2013). However, the path is somewhat more challenging due to the need of combining advertisers, publishers and consumers' expectations. Past studies have shown that combining both offline and online channels might result in better outcomes (Chao, 2012, Laroche, 2013). Synergies are created between cross-channel strategies. Nevertheless, it has been proved difficult measuring the exact impact of combined strategies.

Nonetheless, the presented benchmark literature suggests that E-mail Marketing generates the highest number of clicks, which may influence purchase outcomes. Consequently, E-mail Marketing may have better results generating leads. However, such results may be explained mainly because E-mails are usually sent to customers and not users. Meaning that, persons who received it might already have a certain degree of interest, being more receptive to open and click. Additionally, clients already registered in a company's database are in a different stage of the buying process than the ones not enrolled.

Facebook and Google might have an important role generating traffic to companies' website, increasing the probability of turning web users into potential customers. Moreover, due to the possibility of highly target the ads, Facebook is more used to prospect and gain awareness – for example, it might be better for getting information of potential customers (Personal Communication, 2014). For that reason, it is expected that Facebook ads will drive more traffic to clients' website.

Based on this, the following research hypotheses are proposed for further statistical testing with empirical campaign data:

- o H1: E-mail Marketing will generate more conversions than Facebook;
- o H2: Facebook will drive more traffic to website than E-mail Marketing;
- o H3: E-mail Marketing is more profitable than Google.

Concluding, a literature review was done regarding the fundamental aspects concerning online channels' performance. The next chapter describes both the methodology used to collect data and analyse datasets, in order to answer to research questions and hypothesis. Chapter 4 presents the results obtained in the analysis.

CHAPTER 3: METHODOLOGY

This chapter presents the research methodology employed in the collection and statistical analysis of secondary and primary data, with the purpose of testing the proposed research hypotheses.

3.1 Research approach

There are three types of research approaches, namely exploratory, descriptive and explanatory approaches (Saunders, 2007). Exploratory research is typically conducted by scanning published data, interviewing experts or organizing focus groups with key stakeholder informants, that is, by conducting primarily qualitative research (Saunders, 2009). Its main goals are to generate new insights and clarify understandings about a given problem that remains largely unresolved. This type of approach aims to provide preliminary answers to a particular research problem, not definite conclusions about it.

Descriptive research, on the other hand, entails the elaboration of a detailed, largely quantitative profile of events, people or situations at a given time (Aaker, 1991). To this end, it is crucial to have a clear picture (if not yet a theory) about the phenomena under study prior data collection and analysis. There is no intention to study cause-effect phenomenon (Saunders, 2009). Descriptive approaches are expected to draw conclusions about a given research problem from the analysis of the available data, which is often of a quantitative nature.

Lastly, explanatory research attempts to establish some causal relationships among variables, by resorting to experimental designs and quantitative data analysis (Saunders, 2009). Its main goal is to test whether specific factors lead to, or significantly influence certain phenomenon by manipulating them experimentally.

As stated in Chapter 1, the main goal of this dissertation is to assess the relative performance of online advertising media channels. In order to achieve this, a descriptive research approach was first employed, where secondary data about the features and performance of past advertising campaigns ran in multiple channels were analysed. Based on this, some empirical generalizations about the channels' relative effectiveness - namely in terms of lead generation potential and profitability for digital advertising agencies - were drawn.

Subsequently, an explanatory research approach was undertaken with aim of investigating how comparative assessments of media channel performance might best be employed in the optimization of online advertising campaigns. At this stage, some of the empirical

generalizations drawn from the analysis of secondary data were tested through the performance of a field experiment and the collection of primary data relative to one single-channel online ad campaign. This campaign was selected based on the features and past performance of similar, multi-channel online ad campaigns ran by the same advertiser and publisher, which had been part of the secondary data set.

All data and campaigns under study were compiled after extensive discussion and agreement with Revshare, the Portuguese advertising agency specialized in digital media that supported the research conducted for this dissertation.

3.2 Population and samples

3.2.1 Secondary data

The population of interest for this stage of the dissertation was defined as follows:

- *Pure online advertising campaigns launched in the Portuguese B2C market during the first trimester of 2014, being conducted by integrated digital marketing agencies in at least two of the most commonly employed online ad media channels.*

There are currently 15 advertising agencies operating in the Portuguese market that offer online advertising services (Personal Communication, 2014). Of these, only three are integrated, strictly digital agencies (including Revshare), each launching between 30 and 50 B2C, pure online advertising campaigns per year. Roughly 70% of these campaigns are multi-channel ones (Personal Communication, 2014), which totals 21 to 35 multi-channel ad campaigns ran per agency per year. This leads to between 5 and 9 multi-channel campaigns being run by each agency per trimester. However, relatively more online ad campaigns are conducted in Portugal in the 2nd and 4th trimesters than in the remainder of the year (Personal Communication, 2014).

Secondary quantitative data about the characteristics and performance of a non-probabilistic purposive sample of six B2C, pure online, multi-channel advertising campaigns conducted in the first trimester of 2014 by Revshare were collected. These campaigns were commissioned by four of Revshare's multinational client advertisers with activities in Portugal – one by a mail order/e-tailer in the fashion and home décor industry, another by an insurance company, three by a security company and one by a health care (equipment and service) company. This purposively heterogeneous sampling of campaigns enabled the control of the possible effects

of running multiple multi-channel campaigns for the same or different advertisers simultaneously.

The few studies conducted so far on multi-channel ad campaign optimization focused on non-European B2C markets (Danaher, 2013, Google, 2012, Shea, 2012). The fact that the campaigns under analysis were exclusively launched in Portugal excludes potential confounding country market effects on campaign performance. This also allows for an original study of a European online advertising market.

Taking the established population size into account, the sample selected represents thus 17% to 28.6% of the total of pure online, multi-channel ad campaigns ran in the Portuguese B2C market by integrated digital agencies per year.

3.2.2 Primary data

As earlier stated, a more explanatory research approach was undertaken at a second stage of this dissertation. Here, some of the empirical generalizations resulting from the analysis of secondary data were tested through the performance of a field study (a quasi-experiment). This enabled the collection of primary data relative to the characteristics and performance of one single-channel online ad (promotional E-mail) campaign – out of the six previously analysed –, after such campaign had been optimized from the viewpoint of channel investment. It is worth to mention that the E-mail creativity was also improved – it was decided, in accordance with Revshare, to highlight the main features of the device presented. In a certain way, this modification may have additional implications on results – it is not possible to fully conclude if the variation in performance was exclusively because on channel mix change, the new E-mail design or a mixture of both.

The population of interest at this stage was hence:

- Promotional E-mail marketing campaigns launched in the Portuguese B2C market during the first trimester of 2014 by integrated digital marketing agencies for the health care (services and equipment) industries.

A non-probabilistic purposive sample of one B2C promotional E-mail marketing campaign, conducted by Revshare in the first trimester of 2014, was considered. According to the agency, around 30 E-mail marketing promotional campaigns are launched per trimester in the Portuguese market. Taking the established population size into account, the sample selected represents thus about 3% of the total Portuguese B2C E-mail market.

3.3 Data collection

3.3.1 Secondary data

All six campaigns studied took place exclusively in the context of Portuguese B2C markets and involved at least two ad media channels, out of the three deemed to be the most interesting and representative of the online ad industry:

- Paid Search Ads
- E-mail Marketing
- Social Network Ads

The media channel mix varied across the six campaigns, but was restricted to combinations of E-mail promotional messages, Google Ad Words campaigns and Facebook Display Ads. Different channel mixes were thus employed across campaigns, enabling the comparison of the performance of both single channels and multiple channel combinations. The media mix was established by the advertiser in consultation with Revshare experts. Revshare retained nevertheless the power to distribute the allocated ad budget across different channels at their discretion, and given the results of campaign monitoring[2] – affiliation was only done within E-mail marketing, but not necessarily in all campaigns.

In spite of the heterogeneity of the advertising industries involved, the type of campaign goal was constant across campaigns. As earlier stated, Revshare employs a performance (lead conversion)-based pricing model. As such, the marketing campaign goal for all the six campaigns studied was lead generation. Namely, Revshare was paid by the advertiser per each registration form (conversion) submitted by viewers on a dedicated landing page (see Annex 1 for an example of a landing page), as a result of a click-through on the campaign ad. It is worth to mention that each landing page was exclusively designed for every single campaign. Moreover, all landing pages were designed and were proprietary to Revshare. Aligned thus with Revshare's performance-based business model, the goals for each campaign were set as to generate the maximum number of leads at the lowest cost in a pre-specified period of time. Additional information about the sample of campaigns supplying the secondary data is presented in Table 3.1.

In accordance with performance-based online ad pricing models, the campaigns under study had different time lengths. In this type of contracts, the marketing agency previously agrees

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[2] Figure 2.1 - Main players in the online advertising industry and their inter-relationships, (Personal Communication, 2014).

on a budget and on the number of conversions/clicks to be achieved with the advertising client. Then, the duration of each campaign is established by agency based on these two factors. The variation in campaign length allowed for the collection of several data points per campaign. In this way, it was also possible to control the effects of campaign duration on channel performance.

Table 3.1 – Media mix, goal, length and start date of the online advertising campaigns supplying the secondary data.

Campaign	Media mix	Objective (# forms submitted by users)	Length (days)	Start
*1**	E-mail, AdWords	Maximise	26	24/03/2014
*2**	E-mail, AdWords	2000 in total	31	19/03/2014
*3**	E-mail, AdWords	70 forms per day	15	14/03/2014
4	E-mail, Facebook, AdWords	70 forms per day	66	08/01/2014
5	E-mail, Facebook, AdWords	70 forms per day	66	09/12/2013
6	E-mail, AdWords	40 forms per day	29	07/02/2014

* Campaigns 1, 2 and 3, albeit independent of each other in terms of offers, were all commissioned by the same advertising client, from the home security industry.

For each campaign sampled, information on the number of impressions, clicks, conversions, as well as revenue and cost variables, among others (Table 3.2), were collected from a number of dedicated platforms (Table 3.3). Each conversion was kept unique, meaning that each consumer only registered once in each campaign, by filling out an individual registration form at the advertisers landing page. Revshare employs software that identifies a single consumer throughout a valid e-mail or phone number when taking part in a campaign (Personal Communication, 2014).

Costs' and revenues' are monitored on a daily basis. Moreover, only variables costs were taken into consideration– non-marketing and fixed costs, like the rent or wages, were not considered due to limited access. Nevertheless, in this market, fixed costs usually have a low impact on total costs – production costs are the most important ones. Additionally, the CPM was not calculated due to Revshare's business model – performance-based.

3.3.2 Primary data

A campaign for an advertiser in the health care (service and equipment) sector was selected based on the features and performance of similar, multi-channel online ad campaigns ran by the same advertiser and publisher in the past. One such past campaign was part of the secondary dataset earlier analysed (#6) and involved investments in both Google Ad Words and promotional E-mail blasts between 07/02/2014 to 06/03/2014. Its performance data showed that the two media channels generated a similar number of conversions. According to benchmarks cited on chapter 2, this result was not expected. In one hand, benchmark values state that Google CTR is between 2%-5%, while E-mail is around 6%. Given these values, the result is according to expectations. On the other hand, Revshare's own benchmark showed that the average of E-mail CTR is 13%. In the light of this value, it would have been expected that E-mail was responsible for a higher number of conversions.

Table 3.2 – Description of the type of measures collected for each sampled campaign.

Measures	Description
Channel	Media channel identification
Offer	Campaign identification
Date	Day of campaign launch
E-mails sent	Number of E-mails sent
Open rate	Number of E-mails opened/ Number of E-mails sent x 100
Impressions	Nº of E-mails opened or number of Ad Words/Facebook ads displayed
Clicks	Number of times an E-mail/ad was clicked on
Leads	Number of times a form was submitted to the advertiser
Click-through rate	Clicks/Impressions x 100
Conversion rate	Leads/Clicks x 100
Daily cost	Daily ad costs per media channel
Cost per click	Daily cost/clicks
Cost per lead	Daily cost/leads
Daily ad revenues	Client payout per campaign x Nº of leads
Profit* per channel	Daily campaign's Revenues – Daily campaign's Costs
Profit per click	Profit per channel / Clicks x 100
Profit per action	Profit per channel / Conversions x 100
Return on ad campaign investment*	Daily campaign's Revenues / Daily campaign's Costs

* Both ROI and Profit were calculated solely based on variables costs.

Yet, there was still a great disparity in profits for Revshare between the two. This was due to the marked differences of the cost structure of each channel, as referred on chapter 2. Revshare sent an E-mail blast to the Portuguese database, with no information about whether or not these were already former customers of the advertiser. Besides this, the only segmentation done was to send the e-mail to those who currently open electronic messages. Indeed, running the campaign in Google AdWords generated a loss, while the same campaign done by E-mail generated a profit. Most importantly, the client's objective of generating 40 forms per day, regardless of the channels used, was not achieved. Given these results, one might conclude that the overall performance was influenced by other factors, such as: type of offer, E-mail and Google Ad Words design and copy and quality of e-mail database.

Table 3.3 - Platforms employed in secondary data collection process.

Channel	Platform name	Data collected
E-mail	Doctor Sender, Lua and MediaMail	Number of e-mails sent/open, CTR, open rate and costs
Facebook	Facebook campaign management	Number of impressions/clicks/conversions and costs
Google	Google Adwords Analytics	Number of impressions/clicks/conversions and costs
All	Hasoffers	Number of conversions and revenues

Consequently, Revshare needed to improve overall campaign performance. The aim was now to get as close as possible to 40 forms per day agreed with the advertiser, but at the lowest ad costs for Revshare. After discussing these results with Revshare's management, the new campaign strategy for the health care industry client was designed as follows:

- The remainder of the client's ad budget was invested solely on promotional E-mail marketing, the channel that could deliver the best performance at the lowest costs, in the shortest time span;
- The E-mail message design of the previous campaign was re-used, but in a slightly revamped version that enhanced the distinct, value-adding attributes of the health care equipment offered, in an attempt to increase conversions (see Annex 4) – no changes were made further on the design or message appeal.

In view of this, a new campaign for the health care sector client was launched approximately two weeks after the first one was terminated, running for a total of 26 days from 21/03/2014 to 15/04/2014. The process of data registration and collection for this campaign was in all aspects identical to that earlier described for the secondary data from past campaigns. Primary data was then compiled in an excel file together with the secondary data originated from campaign #6, for further analysis and performance comparison.

3.4 Data analysis

An Excel file was created with the objective of gathering the information concerning all past campaigns, originated from different campaign tracking platforms. It was then necessary to perform a data-cleaning step, as there was some additional information with no relevance for the analysis, as well as missing values. Notice that every time that a channel does not register a conversion, this implies that revenues, CPA, RPC, RPA and ROI are set to zero.

3.4.1 Secondary dataset

The secondary data originating from the six past campaigns under study was organized in a panel data structure, with performance values being displayed per day, advertiser, channel and campaign. A descriptive statistical analysis was then performed on the cumulative values of the metrics recorded per channel. Finally, an OLS (Ordinary Least Squares) multivariate linear regression analysis was conducted to assess the effects of channel selection on different measures of campaign. Since there were few campaigns for which with affiliates' information was available, their potential effect on the independent variables was not studied. Table 3.6 summarizes the dummy variables employed as independent variables, whereas Table 3.7 depicts the dependent, independent and control variables for each regression model estimated.

3.4.2 Primary dataset

The primary data originating from the two past campaigns under study was organized in a panel data structure, with performance values being displayed per day, advertiser, channel and campaign. A descriptive statistical analysis was then performed on the cumulative values of the metrics recorded per channel.

Table 3.4 – Description of dummy variables.

Variables	Dummy variable	
Channel		
Google Ad Words	0 – No	1 – Yes
Facebook Ads	0 – No	1 – Yes
E-mail Marketing	If all other channels are 0	
Industry		
Fashion	0 – No	1 – Yes
Insurance	0 – No	1 – Yes
Health & Care	0 – No	1 – Yes
Security	If all other industries are 0	

Table 3.5 - Dependent, independent and control variables for each regression model estimated with the secondary data set.

Regression Model	Dependent variable	Independent variables	Control variables
1 - Clicks	Daily number of clicks (scale, ln linearized)	Dummy for channel (Ad Words, E-mail, Facebook ads)	Dummy for industry (fashion, insurance, security, health care)
2 - Leads	Daily number of leads (scale, ln linearized)	Dummy for channel (Ad Words, E-mail, Facebook ads) Daily number of clicks	Dummy for industry (fashion, insurance, security, health care)
3 - ROI	Daily ROI (scale, ln linearized)	Dummy for channel (Ad Words, E-mail, Facebook ads) Daily number of clicks Daily number of leads	Dummy for industry (fashion, insurance, security, health care)
4 – ROI (update)	Daily ROI (scale, ln linearized)	Dummy for channel (Ad Words, E-mail, Facebook ads)	Dummy for industry (fashion, insurance, security, health care)
5 – Clicks and costs	Daily number of clicks (scale, ln linearized)	Daily channels costs – E-mail, Google and Facebook (scale, ln linearized)	Dummy for industry (fashion, insurance, security, health care)
6 – Leads and costs	Daily number of leads (scale, ln linearized)	Daily channels costs – E-mail, Google and Facebook (scale, ln linearized)	Dummy for industry (fashion, insurance, security, health care)
7 – ROI and costs	Daily ROI (scale, ln linearized)	Daily channels costs – E-mail, Google and Facebook (scale, ln linearized)	Dummy for industry (fashion, insurance, security, health care)

CHAPTER 4: RESULTS AND DISCUSSION

This chapter presents and discusses the findings of the statistical analysis of the secondary and primary online advertising campaign data. Based on this, the proposed research hypotheses are tested and results are interpreted in the light of previous studies.

4.1 Secondary campaign data

4.1.1 Results of the univariate descriptive analyses and inference tests

Table 4.1 presents the results obtained from the descriptive analysis of secondary data, namely the cumulative values of the effectiveness metrics recorded at the end of each of the six campaigns, per media channel employed.

Concerning channel's individual performance, Facebook ads was responsible for generating the highest number of clicks, which translated to it being the channel driving more traffic to advertisers' websites. This result is opposite to that reported by international benchmarks in Chapter 2, where the CTRs of Facebook are actually much lower than those of Paid Search ads or promotional E-mails. This discrepancy may be explained by the fact that Revshare goes to great lengths to segment Facebook audiences and adequately target their social display ad campaigns accordingly. On the other hand, and as expected, promotional E-mails generated the most leads. As previous stated, this result might be explained by the fact that E-mails were sent to opt-in database members, who usually open promotional e-mail messages. Overall, and also as expected, campaigns with three channels generate a higher number of clicks and leads than campaigns disseminated only through two channels. This may be explained by the cross-effects between channels – by exposing a consumer to the same message in multiple platforms, the probability of having a click/conversion increases. This was expected, since the literature already showed that multi-channel generates better results than single-channel. Given these results, the outcome of integrating three channels in online advertising campaigns seems to be better than using just two, at least for combinations of Paid Search Ads, Facebook Ads and promotional E-mails.

Table 4.2 presents the results obtained from the descriptive analysis of secondary data, namely the cumulative values of the financial performance metrics recorded at the end of each of the six campaigns, per media channel employed.

Table 4.1 – Descriptive statistics for the cumulative values of the effectiveness metrics recorded at the end of each campaign (n=6), per media channel employed.

	Campaign #1*		Campaign #2*		Campaign #3*		Campaign#4		Campaign#5		Campaign#6		Totals
	Clicks Mean±Std Min-Max	**Leads** Mean±Std Min-Max	**Clicks** Mean± Std Min-Max	**Leads** Mean± Std Min-Max	**Clicks** Mean±Std Min-Max	**Leads** Mean±Std Min-Max	**Clicks** Mean±Std Min-Max	**Leads** Mean ±Std Min-Max	**Clicks** Mean±Std Min-Max	**Leads** Mean± Std Min-Max	**Clicks** Mean± Std Min-Max	**Leads** Mean±Std Min-Max	**Totals**
AdWords	196±17,40 [3-61]	0	89±2,96 [7-17]	2±0,45 [0-1]	413±8,41 [6-42]	10±0,63 [0-2]	1051±46,89 [0-154]	53±3,03 [0-9]	1388±109,41 [3-485]	50±2,25 [0-8]	235±6,08 [1-25]	18±0,92 [0-4]	2963 110
Email	218±43,41 [25-130]	7±1,89 [1-5]	161±33,49 [7-84]	12±2,45 [1-7]	2289±1042,98 [24-2238]	76±33,71 [1-73]	6623±403,37 [57-1454]	1183±68,66 [9-225]	239 [0-239]	139 [0-139]	61± [0-61]	19 [0-19]	9530 1417
Facebook							9335±382,34 [48-1747]	172±6,21 [1-24]	9884±297,62 [57-1051]	756±19,95 [4-77]			19219 928
Totals	414	7	250	14	2702	86	17009	1408	11511	945	296	37	

* Campaigns 1, 2 and 3, albeit independent of each other in terms of offers, were all commissioned by the same advertising client, from the home security industry.

Table 4.2 – Descriptive statistics for the cumulative values of the financial performance metrics recorded at the end of each campaign (n=6), per media channel employed.

	Campaign #1*		Campaign #2*		Campaign #3*		Campaign#4		Campaign#5		Campaign#6		Totals
	Costs Total Min-Max	**ROI** Mean±Std Min-Max	**Costs** Total Min-Max	**ROI** Mean±Std Min-Max	**Costs** Total Min-Max	**ROI** Mean±Std Min-Max	**Costs** Total Min-Max	**ROI** Mean±Std Min-Max	**Costs** Total Min-Max	**ROI** Mean±Std Min-Max	**Costs** Total Min-Max	**ROI** Mean±Std Min-Max	**Totals**
AdWords	6,46 [3-61]	0	47,16 [2,63-17,01]	0,94 ±1,58 [0-4,28]	161,12 [1,88-14,58]	0,56 ±0,85 [0-3,19]	215,45 [0-37,25]	1,13 ±1,10 [0-3,50]	88,21 [0,7-16,87]	0,53 ±0,48 [0-1,83]	81,72 [0,16-9,53]	1,89 ±3,85 [0-16,98]	600,12 0,84
Email	85,34 [2,83-54,26]	1,68 ±0,07 [1,58-1,73]	124,44 [32,44-56]	0,98 ±0,46 [0,35-1,41]	624 [8-584]	1,02 ±0,29 [0,61-1,22]	1925,66 [10-328,5]	3,9 ±4,70 [1,82-20,11]	32,43 [0-32,43]	0,59 ±0 [0-0,59]	32,65 [0-32,65]	2,62 ±0 [0-2,62]	2824,52 1,80
Facebook							743,54 [3,91-157,03]	1,11 ±0,58 [0,28-2,26]	667,02 [3,4-72,33]	1,16 ±0,68 [0,29-3,48]			1410,56 1,14
Totals	91,8	2,52	171,6	4,78	785,12	8,52	2884,65	32,88	787,66	13,37	114,37	29,71	

* Campaigns 1, 2 and 3, albeit independent of each other in terms of offers, were all commissioned by the same advertising client, from the home security industry.

The values depicted in Table 4.1 and 4.2 for the mean and standard deviation of the dependent variables' values, show that these do not follow a normal distribution – see annex 5. Hence, and to be able to run an OLS Linear Regression, it was necessary to perform a linear transformation (natural logarithmic function) on daily click /leads/costs and ROI values – see annex 6.

When looking at both tables, it is possible to draw one first (obvious) conclusion - the higher the channel investment (measured by costs), the higher the number of leads generated. This happens in all campaigns except for #6, the more the agency invests, the higher is the average ROI – because it will drive higher leads. Other factors not included in the regression, and related to message design features and type of offer, as described later in this dissertation, explain the poor performance of this particular campaign.

Overall, and on average, E-mail marketing is the one with higher return. As previous stated, the costs structure of this channel helps explaining such fact. Moreover, it is the channel in which Revshare invests the most – translating to an increase of leads. In this case, ROI is mostly explaining by revenues. Facebook also has a positive ROI. Although, in this case, costs are the factor explaining the lower average ROI obtained. Google had a negative average ROI. Revshare only recently started this activity, which means that this channel is not yet optimized and the agency is still learning from the first results – the estimated revenues are around half the total costs.

4.1.2 Results of the multivariate linear regression analyses

After conducting the linear transformations of the dependent variables – clicks, leads and ROI-, linear regression (LN-LIN) models were specified, as follows:

Model (1): $\log 10\, Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon_i$

These models were then calculated with OLS estimation methods (Hair, 2010). With the objective of analyzing the statistical significance of each variable, a 95% confidence level will be assumed - α equal to 5%. According to the P-Value rule:

- H_0: $\beta_i = 0$ → statistically not significant, meaning that variable i do not explain the behavior of the dependent variable. It happens when P-Value > α → Do not Reject H_0.
- H_1: $\beta_i \neq 0$ → statistically significant, meaning that variable i explain the behavior of the dependent variable. It happens when P-Value < α. → Reject H_0.

Table 4.3 resumes the main quality indicators of all regressions done. It is possible to observe that all models have a good explanatory power, since the lowest R-Square adjusted is 72,4% - independent variables are good predictors of the dependent one.

Table 4.3 – Main indicators of the regression's model quality.

Model	R	R^2_{adj}	F_{cha}	df
1 – Clicks	0,856	0,724	94,09	172
2 – Leads	0,883	0,769	66,97	113
3 - ROI	0,957	0,911	175,49	112
4 – ROI (updated)	0,892	0,788	93,936	120
5 – Clicks and costs	0,948	0,895	252,334	171
6 – Leads and costs	0,909	0,818	89,924	113
7 – ROI and costs	0,917	0,832	104,225	119

Tables 4.4 to 4.9 show the results of the several models tested to investigate the impact of channel choice, industry and investment effect on the independent variables – clicks, leads and ROI.

Table 4.4 – Standardized betas and significance of independent variables on dependent variable, Regression 1.

Model 1 - Clicks	Beta*	Significance
Constant	8901,71	.000
Google Channel	-84,51	.000
Facebook Channel	9,20	.724
Fashion industry	183,77	.000
Insurance industry	207,71	.000
Healt & Care industry	-57,73	.000

* To calculate betas' values it was necessary to apply the following formula (e^beta -1) x 100.

Table 4.5 - Standardized betas and significance of independent variables on dependent variable, Regression 2.

Model 2 - Leads	Beta*	Significance
Constant	-57,51	.019
Google Channel	-77,12	.000
Facebook Channel	-76,47	.000
Fashion industry	347,72	.000
Insurance industry	119,46	.001
Healt & Care industry	245,56	.000
#clicks	89,84	.000

* To calculate betas' values it was necessary to apply the following formula (e^beta -1) x 100.

Table 4.6 - Standardized betas and significance of independent variables on dependent variable, Regression 3.

Model 3 - ROI	Beta*	Significance
Constant	1408,95	.000
Google Channel	-13,50	.457
Facebook Channel	36,21	.091
Fashion industry	-96,69	.000
Insurance industry	17,94	.356
Healt & Care industry	-4,40	.837
#clicks	-54,25	.000
#leads	95,23	.000

* To calculate betas' values it was necessary to apply the following formula (e^beta -1) x 100.

Table 4.7 - Standardized betas and significance of independent variables on dependent variable, Regression 4.

Model 4 – ROI (update)	Beta*	Significance
Constant	95,42	.002
Google Channel	-46,95	.003
Facebook Channel	-49,03	.004
Fashion industry	-94,22	.000
Insurance industry	9,31	.692
Healt & Care industry	168,05	.001

* To calculate betas' values it was necessary to apply the following formula (e^beta -1) x 100.

Table 4.8 - Standardized betas and significance of independent variables on dependent variable, Regression 5.

Model 5 – Clicks and Costs	Beta*	Significance
Constant	385,50	.000
Fashion industry	253,96	.000
Insurance industry	149,43	.000
Healt & Care industry	-13,84	.313
E-mail costs	112,55	.000
Facebook costs	167,78	.000
Google costs	85,15	.000

* To calculate betas' values it was necessary to apply the following formula (e^beta -1) x 100.

Table 4.9 - Standardized betas and significance of independent variables on dependent variable, Regression 6.

Model 6 – Leads and Costs	Beta*	Significance
Constant	-73,50	.000
Fashion industry	799,80	.000
Insurance industry	252,89	.000
Healt & Care industry	256,80	.000

	138,45	.000
E-mail costs	138,45	.000
Facebook costs	97,98	.000
Google costs	61,45	.000

* To calculate betas' values it was necessary to apply the following formula (e^beta -1) x 100.

Table 4.10 - Standardized betas and significance of independent variables on dependent variable, Regression 7.

Model 7 – ROI and Costs	**Beta***	**Significance**
Constant	174,56	.000
Fashion industry	-95,01	.000
Insurance industry	15,14	.48
Healt & Care industry	53,88	.119
E-mail costs	-7,87	.14
Facebook costs	-27,09	.000
Google costs	-41,08	.000

* To calculate betas' values it was necessary to apply the following formula (e^beta -1) x 100.

Results show that Facebook and E-mail have the same propensity to generate clicks, while Google will generate on average less 85% clicks than E-mail. The Health Care industry appears to negatively influence the number of clicks, while fashion and insurance performing better than security. These results confirm the descriptive analysis that was previously presented. As earlier stated, Revshare is starting its activity on Google Ad Words, which can explain the lower performance. At the same time, the agency does segment Facebook ads, which may lead to better results. If the investment done in each channel increases by one unit, it is expected that E-mail will campaigns generate 112% more clicks, Facebook 167% and Google only 85%.

The best channel to obtain leads is, without any doubt, the E-mail, with Google and Facebook generating less 77% and 76%, respectively. Overall, all industries studied are better than security – which has been already confirmed by Revshare (Personal Communication, 2014). If the investment done in each channel increases by one unit, it is expected that E-mail campaigns will generate 138% more leads, Facebook 98% and Google only 61%.

Regarding campaign ROI, it is important to look at the estimated impact of costs. According to the results obtained, E-mail marketing costs are the ones with lower impact on ROI. In other words, if Revshare increases in one unit the investment done, ROI will decrease about 7%. The investment on Facebook is expected to have a negative impact of around 27%, while investing one more unit on Google will affect ROI in less 41%.

4.2 Primary ad campaign data

4.2.1 Results of the univariate descriptive analyses

Table 4.11 presents the results obtained from the descriptive analysis of primary data, namely the cumulative values of effectiveness and financial performance recorded at the end of the new email ad campaign for the health care client. For the sake of comparison, data on the old campaign ran for the same client is again presented.

Table 4.11 – Descriptive statistics for the cumulative values of the effectiveness and financial performance metrics recorded at the end of each of the two campaigns conducted for the health care client, per media channel employed.

	First campaign for health care client[*]					Second campaign for health care client				
	Effectiveness			Performance		Effectiveness			Performance	
	Clicks	Leads	CTR	Costs	ROI	Clicks	Leads	CTR	Costs	ROI
Ad Words	235	18	3%	81,72	0,99					
Email	61	19	3%	32,65	2,62	100	79	4%	32,32	11

＊ Denominated as campaign 6 in Tables 4.1 and 4.2.

Table 4.11 shows that both channels had the same CTR, regarding the first campaign. This means that Google and E-mail have the same performance in terms of targeting effectiveness. This was an expected result, since literature states the same (Chaffey, 2014, Kim, 2014). However, much more money had to be invested in Google AdWords to achieve the same results that with E-mail. This can be explained by: 1) the great amount of impressions generated by Paid Search also produces a higher number of clicks; an d 2) Revshare pays the ads per click but receives per lead from the advertiser. In 30 days, Google was responsible for 18 leads, while E-mail generated 19 leads in 3 to 5 days – the objective were 40 leads per day, regardless of channels used. Previous studies have also highlighted significant disparities in Paid Search Ads' performance in terms of clicks vs. conversions and ROI (Agarwal et al., 2011). To conclude, Paid Search required higher investments for the same targeting power as E-mailing, but delivered fewer conversions. This justifies dropping the use of AdWords in the second version of this client's campaign

In spite of focusing of all investment on E-mail, the second campaign was still not able to reach the effectiveness goals required by the advertiser – 40 forms per day. So, why did E-mail not work so well?

The improvement made in the E-mail's design features should not be a valid explanation for campaign effectiveness, since CTR values remained practically the same between the first and

the second campaigns (3% vs. 4%). Nevertheless, it also true that both conversion rate and ROI have increased significantly in the second phase. An alternative explanation could rest on landing page design or industry effects. The form required by the advertiser could be too long, not easy enough to fill, or ask too much personal information. After analyzing the e-mail design again, we might conclude that the fact of highlighting that the device is "transparent", more clients were attracted (and ordering a free-sample). In terms of ROI, it is easier to explain the difference among campaigns: 1) Google is more expensive than E-mail; 2) E-mail generates more leads and revenues – from the agency perspective. Focusing solely on the E-mail channel, it is observable that both the number of clicks and ROI increased from the first campaign to the second one. After analyzing the landing page – designed by Revshare, it is easily observable that the explanation behind such results may inhabit on it. The landing page is very clean and forms are very short and intuitive. Additionally, it has a strong call to action. At last, E-mail Marketing had a celebrity sponsoring the product, which may give credibility. On the hand, the landing page has an ordinary old couple, which can also sort a positive effect – people will realize that this device is for everyone.

4.3 Summary and discussion of the statistical analyses results

The objective of the analysis presented above is to be able to answer the proposed research questions and respective hypothesis:

1. Which channel typically generates the highest number of leads in multi-channel online ad campaigns?

   ➢ H1: E-mail Marketing will generate more conversions than Facebook

Given the sample collected and the analysis performed, E-mail marketing is the best channel when the objective is getting leads. This result was expected, which confirms the hypothesis proposed. The lower costs and opt-in database help explaining these results. Apparently, industry also impact total leads obtained – security services appear to be the most difficult to sell. Again, many other factors may influence these outcomes – integration with offline media, quality of e-mail database, segmentation done and keywords chosen (Danaher, 2013).

2. Which channel typically generates more traffic to advertisers' websites in such campaigns?

   ➢ H2: Facebook will drive more traffic to website than E-mail Marketing

Both descriptive and multivariate analyses allow us to conclude that Facebook Ads are, indeed, responsible for generating the higher number of clicks in multi-channel campaigns. Also, this channel is slightly better than E-mail (which, in turn, is better than Google). By increasing ad investment by one unit, Facebook display ads will generate 167% more clicks. This value is higher than both E-mail' (112%) and Google' (85%) incremental clicks.

Previous reports suggest that Facebook ads have low CTR values (Facebook, 2013). Nevertheless, the empirical results of this dissertation could not support this. As earlier stated, Revshare carefully manages and segments this type of ads, which may explain the different performance results here obtained. On the other hand, it is important to notice that Facebook ad campaigns were not envisaged by Revshare in the security and health care industries, where overall campaign results were poorer that in other industries. So industry effects may also help to explain Facebook ads' performance in this particular study, as well as factors listed by extant literature (Briggs, 2005, Personal Communication, 2014), such as ad quality, segmentation or integration with offline media.

3. Which channel typically yields the highest ROI in multi-channel online ad campaigns?
   ➢ H3: E-mail Marketing is more profitable than Google

Descriptive analysis supported the proposed hypothesis, showing that E-mail marketing was indeed responsible for generating higher returns: average ROI was 1,80. This means that, on average, Revshare was able not only to recover the initial investments made in this channel, but also generate an additional 80% in ad revenues. This is most likely explained by the great discrepancies observed in unit campaign costs between E-mail, on one hand, and Facebook and Google ads, on another.

Such results about the low cost and high reach of promotional E-mails are also supported by previous reports from corporate practice and confirm this channel's potential for more efficient and effective online advertising activities (Danaher, 2013). Nevertheless, it is worth to mention that metrics such as open rate, or SPAM issues were not assessed, which may have changed the results. Like earlier stated, many other factors might explain the outcomes, such – database quality, e-mail content, performance of the ESP, among others (Personal Communication, 2014).

Table 4.5 compares the CTR performance of each channel against the benchmarks exhibited in chapter 2. This shows that Revshare clearly has a clear and solid strategy regarding E-mail marketing campaigns. However, the strategies adopted for Facebook and Google ads should

be improved. In spite of the good segmentation level achieved in Facebook ad campaigns by Revshare, their CTR is still quite far from reported benchmarks.

Table 4.12 – CTR comparison between benchmarks and campaigns studied (Anonymous, 2013b, Chaffey, 2014, Kin, 2014, Personal Communication, 2014).

Channel	CTR benchmark values	CTR of campaigns studied (Portugal)
E-mail Marketing (European level)	6%	11,00%
Facebook Ads (Portugal)	0,38%	0,07%
Google Ad Words (Worldwide)	5%	1,15%

Real data from online campaigns is not as easy to collect. Although online media is known by the possibility of measuring any action, the reality shows a different situation. For instance, it can be that due to a technical glitch, a campaign's daily conversion values may not be registered. For this reason, Revshare uses several platforms, so that it can guarantee an adequate tracking of campaign results.

Many factors that may influence campaigns' results were not considered in this dissertation, such as – database quality, advertisers' reputation and the type of offer sold. Revshare did not have any kind of information regarding those factors. Moreover, due to time constraint, it was not feasible to take into consideration all factors that could influence multi-channel performance. However, such variables may, indeed, have changed the results obtained – although is not is possible to infer to what extent.

Lastly, there was limited access to affiliates' E-mail delivery platform. In order to get the values for the number of impressions, clicks and conversions, it was necessary to ask to each affiliate. This was a very time consuming task, which was not possible to carry out for all the campaigns analyzed.

CHAPTER 5: CONCLUSIONS AND IMPLICATIONS

This chapter presents the overall conclusions and implications that can be drawn from the research work presented in this dissertation.

5.1 Conclusions

Consumers are spending more and more time in multiple online platforms. This is the reason why companies are increasingly using digital marketing to reach them. Consequently, hundreds of millions of dollars are spent by advertisers, in an attempt to place their brands in high-traffic websites (Smith, 2011). Companies aim to match their advertising goals to the channels that deliver the best performance for a particular aim by combining online media in the best way possible. Nevertheless, most companies are still trying to learn how to best leverage use online ad channels (Anonymous, 2012). It is therefore of great managerial interest to be able to compare the performance of different online advertising media, such as dissertation attempted to achieve

As stated in chapter 1, the main aim of this dissertation was to compare the performance of different advertising media channels for a particular online marketing campaign, with campaign performance being assessed both in terms of effectiveness (traffic and lead generation) and profitability (ROI). Revshare, a Portuguese integrated, strictly digital, performance-based marketing agency, operating in several country markets, established a protocol with Católica-Lisbon in order to collaboratively advance research in the field of online advertising. Hence, the empirical results obtained were interpreted according to an agency's perspective.

Results have showed that using a combination of three channels – E-mail Marketing, Google Ad Words and Facebook ads -, will produce better outcomes that only using two of them - E-mail Marketing and Google Ad Words. Moreover, the more the agency invests on a given media, the higher is the tendency of generating higher leads. In one hand, and as expected, E-mail Marketing appears to be the best channel in generating leads, which is also translated to the media with return on investment. On the other hand, Facebook Ads have a strong performance in generating clicks – driving traffic to client's website.

The online advertising industry has been studied for a long period of time. However, due to constant technological improvements, terms and practices change in a very fast pace. Given

that, this study presents the latest concepts and practices regarding online advertising media. Moreover, there are few studied conducted analyzing the performance of multi-channel campaigns. This dissertation gives valuable information respecting the three main online media used – E-mail, Facebook Ads and Google Ad Words.

In terms of managerial implications, this study has analyzed the online advertising industry in Portugal. Also, it has constructed a benchmark for the national online advertising agencies. Furthermore, the study was conducted outside the US market, which may also be relevant for foreign investor considering entering into the Portuguese market. Additionally, online agencies may also confirm if their campaigns are having a good performance or not.

5.2 Limitations and future research

The sample of this study is composed by 6 Portuguese campaigns. Campaigns were run during the first trimester of the current year. As previously stated by Revshare, the number of campaigns is higher during the second and fourth trimester. Additionally, the performance was studied taking in consideration one objective: Lead Generation. Several others objectives are plausible – i.e.: branding. The findings reported in this dissertation should thus not be rashly generalized to other channels and campaign goals, while future research should definitely include the analysis of seasonality effects. Additionally, interaction effects between channels were not studied within the OLS Linear Regression done, which would definitely complicate the analysis of dataset. However, it would be very interesting analyzing such effects, not only from the academic perspective but also due to the recent interest that both clients and digital agencies are showing about multi-channel campaigns – which may solve the attribution problem.

Several factors that also influence performance were not considered. It would be interesting to have a quality measure regarding the E-mail design, E-mail name of sender and subject keywords choice, E-mail database quality and the integration with offline media.

The future research could study the following topics:
  o The impact of E-mail database quality on campaign performance;
  o The best practices regarding data collection methods in multi-channel campaigns – integration of E-mail Marketing with Facebook and Google Ad Words;
  o Interaction effects between channels.

The E-mail database is one the crucial and most important factors that could make the difference in terms of performance. A good database allows a better segmentation, which may

also reflect better opening rates and CTR. The higher the CTR, the higher the probability of generating leads. The channels' output integration is another factor that is crucial for campaign's performance. To be able to see what kind of ads/content – using AB testing -, is a fundamental step for the on-going optimization of the campaign. This is due to the fact of also existing cross-effects between channels. Ultimately, agencies may use each channel for a different purpose, but having the same objective into consideration – i.e.: use Google Ad Words for awareness, Facebook Ads to reinforce awareness and drive traffic to website and using E-mail to make consumers visit the landing page and generate a lead.

The main interest relies on understanding, in a more complete way, how channel performance is affected. As previously explained, many other factors beside costs or industry should have an important impact on the number of clicks and leads, such as database quality, e-mail design and quality of landing pages. As discussed in this dissertation, although online advertising allows a better measurement and monitoring of the activity, it is clear that not all the available software register all clients' movements. In that sense, sometimes, it is harder to agencies to calculate the exact ROI of individual campaigns.

Ultimately, the objective of future research could end up in a model that describes the impact of several factors in the total number of clicks, leads and average ROI.

Annexes

Annex 1 – Types of online advertising, by Thomas L, (Lorrie, 2011).

Type	*Characteristics*
Vertical Search	Can be seen as a streamlined search solution, which helps surfers find what they are looking for. The main advantage is the specific targeting, meaning that this kind of engine can be tied to one specific industry. For example, if you sell sports goods it may be worth of buying a listing on retailers that sell such type of goods. Additionally, buying key phrases on Google, Yahoo! and Bing is also an alternative to reach your audience.
Display Advertising	It is usually defined as an interactive way of promoting online commodities. The most common format is the so-called Banner Ads. Basically, it is mostly composed by images. The IAB provides an extensive, modern and scalable framework of size standards for publishers and creative agencies within the digital world (iab, n.d.).
E-mail Marketing	Implicates reaching customers in their e-mail boxes. It is commonly sent in the form of a newsletter, advertising, a dedicated message or communicating something new to customers.
Viral Marketing	Is a phenomenon that facilitates persons to spread out the marketing message. Companies cannot predict in advanced if a campaign will be viral, because the main agent is the consumer – if they enjoy and like the probability of sharing increases and vice-versa.
News Sites	Given the opportunity to place specific ads on the news, opinion, entertainment, on other sites frequented by your audience or when persons search a specific keyword. The main advantage is that it allows choosing in what type of blogs or sites your ad will appear. The most common formats are Google AdWords, Google AdSense and Yahoo! Publisher Network.
Blog Marketing	Can be a strong tool building relationships, by creating strategic marketing partnerships and driving traffic to websites. There are several types of blog marketing networks that connect advertisers with bloggers.
Behavioural Advertising	Is a technique that helps tracking users´ online actions with the objective of showing relevant ads according to his/her surfing behaviours – like products purchased or sites visited. Retargeted ads are the ones that appear once on your current website and if a surfer leaves that specific page and goes to another, the ad will be displayed again. The main purpose is to get surfers' attention.
Social Media Marketing	Consists of engaging consumers throughout social media advertisements or buying advertising on such platform. This kind of advertising can be used to increase

awareness, generate traffic to your website or target ads based on peoples´ profiles –
like age, city, interest, among others. The most known platforms are Facebook,
YouTube, Twitter and LinkedIn. Due the popularity of these channels, nowadays it
very difficult to stand out, meaning that you really need to make an impression
comparing to your competitors.

Contextual Advertising	Occurs when advertisers target specific keywords or phrases within content on other peoples' websites. For example, if you put your mouse on top of these words, an ad may be displayed.
Affiliate Marketing	This is a model of revenue sharing between online advertisers and publishers. Payment is based on performance metrics such as number of clicks, sales, registration or a hybrid model. "Advertisers become affiliates by allowing other websites or advertising networks to promote an offer and get paid when they produce sales, leads, e-mail addresses, or whatever the desired "action" is". Advertisers are only paid if publishers take actions. Additionally, affiliates must track the actions in order to ensure that they are paying their partners correctly and submitting accurate actions. One of the most successful cases is Amazon Associates, where websites pay a percentage of sales for products sold.

Annex 2 – Metrics to assess online performance, according to Hubspot (Vaughan, 2012)

Metric	*Definition*
Bounce Rate	It is the percentage of total E-mails sent that could not be delivered to the recipients´ inbox.
Delivery Rate	Defined as the percentage of E-mails that were actually delivered to recipients' inboxes.
Click-Through Rate	Calculated by dividing total clicks by the number of impressions.
E-mail sharing/forwarding	It is described as the percentage of recipients who clicked on a share button to post E-mail content to social media network and/or who clicked on the forwarding button.
Social Audience Growth and Reach	It is the total number of people engaging with a brand in social media channels.
Social Media Engagement	The number of interactions generated by social media channels.
Cost-Per-Click (CPC)	The amount paid for each click given a specific search ad.
Cost-Per-Acquisition (CPA)	How much it is spent on PPC advertising for each conversion.
Conversion rate	It is the percentage of persons who completed a desired action.

Annex 3 – Examples of E-mail Marketing


Annex 4 – E-mail copy in primary data campaigns

E-mail copy in the first phase

E-mail copy in the second phase

Annex 5 – Example of linearization of dependent variables   Histogram and Skewness/Kurtosis values
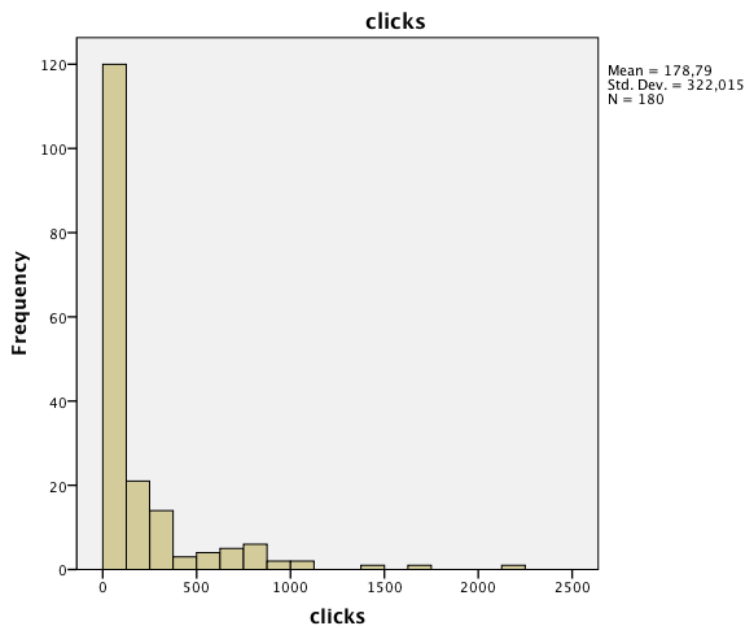
Statistics

		clicks	conversoes	custo	roi
N	Valid	180	180	180	180
	Missing	0	0	0	0
Mean		178,79	13,87	27,2340	1,0743
Median		35,00	2,00	7,6550	,1179
Mode		3	0	2,63ᵃ	,00
Skewness		3,182	3,955	5,336	5,427
Std. Error of Skewness		,181	,181	,181	,181
Kurtosis		13,000	17,925	34,449	36,420
Std. Error of Kurtosis		,360	,360	,360	,360
Sum		32182	2497	4902,12	193,37

a. Multiple modes exist. The smallest value is shown

lnClicks=LN(clicks)

Mean = 3,86
Std. Dev. = 1,736
N = 178
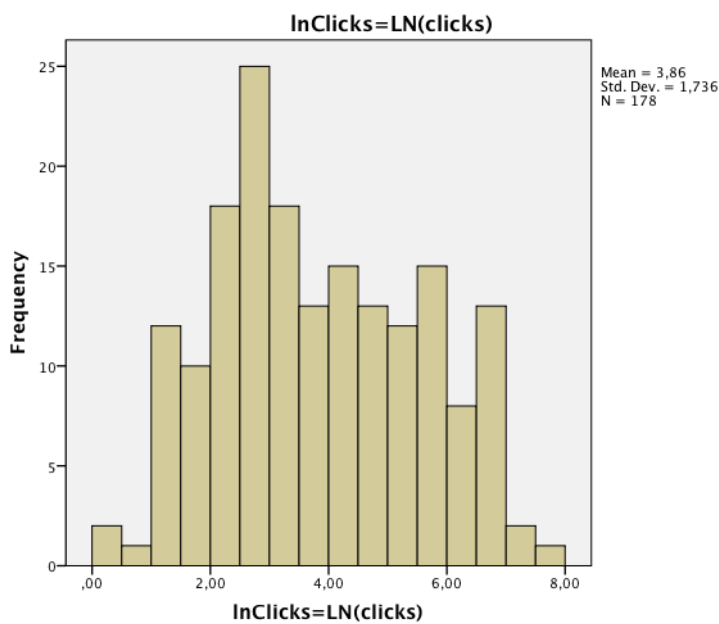
Annex 6 –Multicolinearity

Model 1

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	4,500	,219		20,516	,000					
	dummy google	-1,865	,216	-,528	-8,635	,000	-,764	-,550	-,341	,417	2,398
	dummy fb	,088	,249	,022	,354	,724	,627	,027	,014	,387	2,585
	dummy redoute	1,043	,218	,262	4,790	,000	,333	,343	,189	,521	1,921
	dummy axa	1,124	,197	,299	5,697	,000	,423	,398	,225	,567	1,764
	dummy acust	-,861	,213	-,189	-4,052	,000	-,537	-,295	-,160	,717	1,394

a. Dependent Variable: lnClicks=LN(clicks)

Model 2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-,856	,359		-2,385	,019					
	dummy google	-1,475	,226	-,480	-6,516	,000	-,637	-,523	-,287	,358	2,797
	dummy fb	-1,447	,208	-,468	-6,963	,000	,343	-,548	-,307	,430	2,326
	dummy redoute	1,499	,243	,474	6,170	,000	,258	,502	,272	,330	3,034
	dummy axa	,786	,232	,253	3,391	,001	,222	,304	,149	,349	2,866
	dummy acust	1,240	,276	,255	4,494	,000	-,316	,389	,198	,602	1,661
	lnClicks=LN(clicks)	,641	,069	,675	9,279	,000	,797	,658	,409	,367	2,721

a. Dependent Variable: lnConvs=LN(conversions)

Model 3

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2,714	,269		10,102	,000					
	dummy google	-,145	,194	-,040	-,746	,457	,080	-,070	-,020	,260	3,848
	dummy fb	,309	,182	,085	1,704	,091	-,386	,159	,047	,301	3,324
	dummy redoute	-3,407	,205	-,913	-16,599	,000	-,882	-,843	-,453	,247	4,056
	dummy axa	,165	,178	,045	,927	,356	,462	,087	,025	,317	3,157
	dummy acust	-,045	,219	-,008	-,206	,837	,344	-,019	-,006	,511	1,958
	lnClicks=LN(clicks)	-,782	,067	-,698	-11,678	,000	-,312	-,741	-,319	,209	4,795
	lnConvs=LN (conversions)	,669	,069	,568	9,736	,000	-,157	,677	,266	,219	4,556

a. Dependent Variable: lnROI=LN(ROI)

Model 4

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	,670	,214		3,132	,002					
	dummy google	-,634	,209	-,180	-3,036	,003	,087	-,267	-,125	,482	2,075
	dummy fb	-,674	,229	-,187	-2,939	,004	-,385	-,259	-,121	,420	2,380
	dummy redoute	-2,850	,249	-,769	-11,423	,000	-,872	-,722	-,470	,374	2,676
	dummy axa	,089	,225	,025	,397	,692	,444	,036	,016	,424	2,359
	dummy acust	,986	,298	,172	3,309	,001	,338	,289	,136	,630	1,588

a. Dependent Variable: lnROI=LN(ROI)

Model 5

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1,580	,130		12,148	,000					
	dummy redoute	1,264	,133	,317	9,527	,000	,333	,589	,232	,535	1,870
	dummy axa	,914	,122	,243	7,478	,000	,423	,496	,182	,564	1,774
	dummy acust	-,149	,147	-,033	-1,011	,313	-,537	-,077	-,025	,571	1,750
	LN(cost_mail)	,754	,038	,630	19,829	,000	,355	,835	,483	,587	1,703
	LN(cost_fb)	,985	,044	,802	22,229	,000	,674	,862	,542	,455	2,196
	LN(cost_google)	,616	,058	,373	10,643	,000	-,247	,631	,259	,483	2,069

a. Dependent Variable: lnClicks=LN(clicks)

Model 6

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-1,328	,212		-6,274	,000					
	dummy redoute	2,197	,198	,694	11,076	,000	,258	,721	,434	,390	2,563
	dummy axa	1,261	,187	,406	6,739	,000	,222	,535	,264	,422	2,368
	dummy acust	1,272	,250	,262	5,085	,000	-,316	,432	,199	,578	1,730
	LN(cost_mail)	,869	,050	,982	17,315	,000	,481	,852	,678	,477	2,097
	LN(cost_fb)	,683	,059	,715	11,569	,000	,402	,736	,453	,402	2,491
	LN(cost_google)	,479	,084	,323	5,735	,000	-,368	,475	,225	,482	2,073

a. Dependent Variable: lnConvs=LN(conversions)

Model 7

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1,010	,231		4,377	,000					
	dummy redoute	-2,998	,216	-,810	-13,864	,000	-,872	-,786	-,508	,394	2,538
	dummy axa	,141	,199	,040	,709	,480	,444	,065	,026	,429	2,329
	dummy acust	,431	,274	,075	1,570	,119	,338	,142	,058	,588	1,700
	LN(cost_mail)	-,082	,055	-,078	-1,487	,140	,341	-,135	-,054	,487	2,055
	LN(cost_fb)	-,316	,064	-,283	-4,908	,000	-,359	-,410	-,180	,404	2,473
	LN(cost_google)	-,529	,092	-,313	-5,754	,000	-,052	-,467	-,211	,455	2,200

a. Dependent Variable: lnROI=LN(ROI)

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