



ANALYSIS OF STRATEGIES FOR MANAGING ONLINE ADVERTISEMENTS, INCLUDING PPC CAMPAIGNS, DISPLAY ADS, AND SPONSORED CONTENT, TO OPTIMIZE REACH, ENGAGEMENT, AND CONVERSION

¹Dr. Sudhakar Madhavedi, ²Shruthi Teegala, ³Trupti Makwane, ⁴P.Sudhaker

¹Associate Professor, ^{2,3,4} Assistant Professor

Department of MBA

Kshatriya College of Engineering

ABSTRACT

This study focused on the role of automation and prediction about the future of a specific type of online advertising - pay-per-click advertising (PPC). The PPC advertising, also known as cost-per-click advertising is a competition-based charging method, which is a click-based purchase model for advertisers and charges them for only clicks that reflect the visits to the links provided by the advertiser. An amount that advertisers pay is calculated by predetermined factors by search engines, which are related to the bidding of competitors and quality of content published by the advertiser. After the rise of online advertising, companies attempt to target specific audiences with PPC advertising solutions on search engines by using detailed targeting options. PPC did not help companies only on search engines, but also served as a billboard on various websites that are Display Network's partners like Google Display Network, Yandex Ad Network etc. Advertisers got the benefit of using contextual advertising and getting rare audiences with specific targeting features. Additionally, businesses were able to make data-driven marketing decisions by analysing historical data and switched from old school intuition-based decisions to data-driven decisions in this new digital marketing era. From the beginning of the rise of internet or online marketing, Pay-Per-Click become an actor in main marketing activities, merging 4 sides - PPC vendors (Google, Bing etc.) advertisers (businesses promoting their services and products), publisher websites who act as placements for display ads, internet users who are potential buyers and seek for information about products or services in different intent cycles like in sales funnel. In non-display ads, search engines themselves act as publishers of sponsored ads. Therefore, advertisers focus on focus keywords of internet users and other variables that affect the conversion probability of them, such as time, device category, household income, gender information provided by the advertising platform. As the advertising effectiveness depends on several factors, growing large PPC accounts become hard to manage and optimize. In that stage, automated optimization and management solutions become economically and practically available. Increasing the efficiency requires human intuition and routine optimization tasks for PPC managers in manual bidding. Although manual bidding gives more control on the PPC campaigns, larger accounts create larger challenges when managing thousands of keywords and ad groups. Additionally, human intelligence lacks to find all correlation among different variables for several campaigns at the same time. In order to decrease this guesswork many PPC

84



management tools offered by third parties and Google Ads introduced its solutions to increase the advertiser experience. Both PPC agencies, which serve companies in the optimization, reporting, management of the advertising campaigns, third-party software companies and PPC platforms (Google, Bing etc.) introduce their unique solutions to manage PPC accounts. This study investigates the effect of automation solutions introduced by Google Ads, analyzes the results of using Google Ads Smart Bidding Strategies and the marketplace of PPC Automation, and gives a future prediction about the possible changes in the way of automation with non-empirical research.

DOI Number: 10.48047/nq.2019.17.12.NQ19120

NeuroQuantology2019;17(12):84-91

1. INTRODUCTION

1.1 Background

This study focused on the role of automation and prediction about the future of a specific type of online advertising - pay-per-click advertising (PPC). The PPC advertising, also known as cost-per-click advertising is a competition-based charging method, which is a click-based purchase model for advertisers and charges them for only clicks that reflect the visits to the links provided by the advertiser. An amount that advertisers pay is calculated by predetermined factors by search engines, which are related to the bidding of competitors and quality of content published by the advertiser.

After the rise of online advertising, companies attempt to target specific audiences with PPC advertising solutions on search engines by using detailed targeting options. PPC did not help companies only on search engines, but also served as a billboard on various websites that are Display Network's partners like Google Display Network, Yandex Ad Network etc. Advertisers got the benefit of using contextual advertising and getting rare audiences with specific targeting features. Additionally, businesses were able to make data-driven marketing decisions by analysing historical data and switched from old school intuition-based decisions to data-driven decisions in this new digital marketing era.

From the beginning of the rise of the Internet or accounts. This study investigates the effect of online marketing, Pay-Per-Click becomes an automation solutions introduced by Google Ads, actor in main marketing activities, merging four analyses the results of using Google Ads Smart sides - PPC vendors (Google, Bing etc.) Bidding Strategies and the marketplace of PPC advertisers (businesses promoting their services Automation, and gives a future prediction about

and products), publisher websites who act as placements for display ads, internet users who are potential buyers and seek for information about products or services in different intent cycles like in sales funnel. In nondisplay ads, search engines themselves act as publishers of sponsored ads. Therefore, advertisers focus on focus keywords of internet users and other variables that affect the conversion probability of them, such as time, device category, household income, gender information provided by the advertising platform. As the advertising effectiveness dependson several factors, growing large PPC accounts become hard to manage and optimise. In that stage, automated optimisation and management solutions become economically and practically available

Increasing efficiency requires human intuition and routine optimisation tasks for PPC managers in manual bidding. Although manual bidding gives more control of the PPC campaigns, larger accounts create larger challenges when managing thousands of keywords and ad groups. Additionally, human intelligence lacks to find all correlation among different variables for several campaigns at the same time. In order to decrease this guesswork, many PPC management tools offered by third parties and Google Ads introduced its solutions to increase the advertiser experience. Both PPC agencies, which serve companies in the optimisation, reporting, management of the advertising campaigns, third-party software companies and PPC platforms (Google, Bing etc.) introduce their unique solutions to manage PPC



the possible changes in the way of automation means that overall performance evaluation is with non-empirical research.

1.2 Research Objective

As the online advertising market changes and is influenced by automation, the usage of its sub-sectors, such as PPC is also impacted by contemporary business solutions. The research objectives are as follows:

1. Understanding the main role of PPC advertising as an online advertising channel in the customer journey
2. Understanding the automated solutions for PPC advertisers to maximise their return on investments, investigating how automated bidding strategies work and are there any other alternatives provided by third-parties by applying non-technical theoretical analysis.
3. Predicting the possible future outcomes of implementing automation solutions for industry players - PPC managers or agencies, businesses or advertiser companies, ad platforms (in case of Google Ads), online users (as an affected audience).

1.3 METHODOLOGY

The research is mainly focused on the description and prediction about the central theme by mainly using non-empirical analysis with theoretical aspects of the topic. Collected data includes the case studies as secondary data to examine the current implementations in the market, and the analysis of the data has been performed according to the related literature review for deriving strong and relevant conclusions. The content analysis method is used to identify, analyse and report patterns in the theme. The fact-finding method is used to analyse current circumstances. The primary object of descriptive study is to describe events, phenomenon and circumstances based on observation and other sources.

The main weakness of the method is that it certain targeted search terms used by search does not include primary empirical data engine users when they look for specific collected from advertisers who use this information and the sponsored text ad including advertising channel. Collected secondary data website landing page URL, as stated by (Das and existing industry use cases were provided Sharma et al., 2012), appears on the particular by advertising platforms and agencies which position of the results – absolute top, top and aim to promote and attract advertisers, which bottom of the page. The auction system

biased. Additionally, further research results with primary data retrieved from different advertisers may argue against the effectiveness of using Smart Bidding Strategies by Google Ads. Limitations occur because of the data security and confidentiality concerns by businesses that are unwilling to share information. However, the general overview provides insights into the system and the shaping industry

2. LITERATURE REVIEW

This chapter includes a review of the literature and theoretical studies regarding PPC advertising. The PPC was defined as advertising which is based on competitive bidding among advertisers through search engine advertising platforms (Nunan and Knox, 2011). As described as keyword advertising by Liu et al. (2010), one of the main advantages of PPC makes advertisers able to target audiences based on their search intent on search platforms via leveraging sponsored ads. Therefore, it's also known as search engine marketing (Jansen and Schuster (2011) because of searching and finding relevant information about products or services. Although there are click fraud incidents in PPC history, also known as a "hit inflation, search engines are still trustworthy for companies to publish ads and acquire potential customers. Advertisers pay when their ad gets clicks rather than impressions. (Farris et al., 2010) This charging method was first introduced by Overture, which was previously Goto.com, and this conception first was offered at a conference in 1998 in California (Ellam, 2004). The competitor brands, such as Google, Yahoo! also implemented the same model and got billions of dollars from this advertising concept (Dellarocas, 2012)

Liu et al. (2010) classified two categories in keyword advertising – contextual advertising and sponsored links. Sponsored links are text ads on the search engine results which trigger

determines the position of each ad based on several factors, such as ad content quality, As search advertising targets users who have relevancy, bid (Chen et al., 2007, previously reflected their interest in the certain Katona&Sarvary 2010). If one of the Quality product or services by searching for a related score determinant - the expected CTR is less search keyword on a search engine (Abou et al., than or equal to the ratio of the ad price to the 2012; Sayedi et al., 2014), it was focused to cost per click on an advertising network, the analyse the effects of PPC advertising in the advertiser is always recommended to prefer sales funnel concept by several types of pay-per-view bidding strategy for research.

advertisement campaigns. (Kwon, 2011).Matz, The effectiveness of PPC in buying funnel Kosinski, Nave, and Stillwell (2017) found that models was evaluated in order to analyse for the effective outcomes from psychological consumer interaction and experience with targeting in the contextual advertising search advertising campaigns on search engines convincing contents matched to the during the purchase decision and purchase psychological personas of a large segment of process. It revealed the effectiveness of using a online users produced up to 50% more online 6 funnel model to classify search keywords and sales and 40% more clicks than their non-target different query types based on search customized or mismatched equivalents. Overall, intent in buying funnel stages (Jansen et al., PPC campaigns were found effective to increase 2011). This research also found that online sales and traffic through search engines and purchase behaviour by using search engines display advertising networks.

Additionally, some researches showed the higher importance of paid search ads in the increase of conversion rates and customer lifetime value in comparison to other advertising types. (Chan, et al., 2011; Rutz& Bucklin, 2011). Practical results from the research by Chan et al. (2011) showed that customers obtained from Google search advertisements had higher transactions rather than those obtained from other advertising channels. Research also included future sales data and the value of the new purchasers. This practical framework also supported the notion that paid search advertising is a productive, effective and powerful tool to increase long-term profit with certain investment in search advertising

Paid search advertising was determined as having a more positive impact on increasing sales in comparison to offline advertising. It has an influential role in the purchase decision of online users in the stage that is close to purchasing and provides enhanced targeting features to get purchases. In addition to paid search advertising, display advertising has a long-term effect on the market value of the firm. (Bayer et al., 2020).

does not exactly fit and represent the exact buying funnel stages in real life, and consumer actions did not follow the pattern as predicted. However, it was still determined as having an impact on the final purchase decision by capturing a certain segment of users and educating them in the process of the purchased decision. Goldfarb & Tucker (2011) stated that paid search advertising could show ads at the time, which is closer to the purchase decision and is prone to impact it. Paid search advertisements generate clicks and user engagement with the website of the promoted brand, which is uncommon and unavailable in offline advertising. Another research (Kim et al., 2019) also analysed the same buying funnel model in the example of shoe brands Nike and Adidas in Korea and found the different patterns in user behaviour for leader and follower brand in terms of following funnel stages. This difference points out the difference in brand loyalty, product awareness and other factors that affect how to act differently during the purchase decision. In that case, manual optimisation and bidding become ineffective in case of lacking expertise and data analysis when finding unique patterns and correlations for certain stages of buying funnel while several contextual signals changing the results and affecting outcome.

The effective use of PPC depends on the right bidding and sophisticated targeting in order to capture more relevant audiences on the Internet-based on the behaviour and interests of certain products and services. Paid search campaign management includes some tasks that must be performed regularly: (1) selecting relevant keywords, (2) setting and changing the bids for keywords, and (3) creating the advertising content (Rutz et al., 2012).

3. THEORETICAL FRAMEWORK

This chapter continues with the applied theoretical frameworks and related works in order to understand the role of PPC in online advertising and to create a detailed understanding of the business KPIs with the sales-funnel approach. Search Engine Advertising was described as the main revenue source for search engine platforms (Jafarzadeh et al., 2015) and is also known as keyword advertising, search advertising, search engine marketing or PPC. It is determined as one of the essential marketing elements for many companies (Quinton and Khan, 2009). In 2019, Google advertising revenues was \$134.8 billion, with YouTube contributing \$15 billion for the year, which shows the main revenue stream on search engines. (Alphabet, 2019) Although digital or online marketing differs from traditional marketing, the way of attracting customers and the journey of buyers almost follow the same patterns in both channels. In digital marketing concept companies attempt to adapt their business objectives to digital metrics and Key Performance Indicators (KPIs) derived from a short-term and long-term marketing strategy.

Key Performance Indicators in PPC Advertising

The main objective of each company is to maximise profits while reducing costs. Each brand wants to get recognition in the customer at least 50% of the ad content. From the mind and create loyalty to drive more perspective of advertisers, impressions, and the customers through word of mouth as people audience reach of ad content is an indicator of are convinced by other opinions about products brand awareness and brand recognition. or services (Banerjee, 1992). In the case of Mangani (2004) analysed the difference online advertising (i.e. e-marketing or digital between pay-per-view and PPC methods from advertising), the main performance metrics are the perspective of a web publisher and found

monitored in order to evaluate the effectiveness and efficiency of certain campaigns. Based on the advertisers' goals, the KPIs can differ. Main KPIs for PPC advertising are as follows:

Brand Awareness and Reach KPIs (Visibility)

Advertisers do not always focus on website actions and achieve direct results, such as sales revenue from advertising campaigns. Companies use brand awareness goals, usually when introducing new products or services, showing updated features of their products and announcing upcoming innovations. In such cases, they need more engagement with their content or just viewability on relevant placements, such as websites and YouTube videos. Display and Video network is popular for brand awareness campaigns. Many campaigns focus on building brand awareness, and this objective has its own KPIs. Brands attempt to reach as many internet users as possible with their advertisement message to create brand recognition

The research published by Google and IpsosMediaCT in 2014 revealed that search ads have a notable impact on brand awareness and should be included in marketing plans (Bao & Koppel, 2014). It found that search advertising influences brand perception and provide cost-effective solutions. Additionally, unlike traditional advertising channels, it can create brand awareness in the process of the search when users gather information about products or services. In other words, users see search ads at the moment that they are interested in related information. In the case of Google Ads, main KPIs of these campaigns are as follows:

Impressions

"Impressions" as a metric represents how often advertising content is shown on Display and Video Network in case of Google Ads. The

that the revenue depends on the attitude of consumers toward advertising

In the case of brand awareness campaigns, advertisers are charged for thousands of viewable impressions which is called target vCPM bidding on Google Ads. This is different from the PPC charging method, in which advertisers pay only for actual clicks. When advertisers are looking for actual clicks and user engagement with their ad content, they focus on engagement metrics, such as click-through-rate and conversion rate.

The AIDA Funnel approach for PPC advertising

Research by Nadjla et al. (2014) confirmed that demonstrate the importance of PPC advertising the Internet had become an essential in marketing, the AIDA model was used below.

information retrieval system for numerous

users because it includes different sorts of **4. PPC AUTOMATION**

information in various formats. Users could

access blog posts, academic papers, video files, 4.1 Importance of Automation in Digital movies, accounting reports, images and other Marketing Some studies (David, 2015; Bessen, formats via online search engines in which a 2016) show that computer automation causes database of thousands of websites is included. job losses but at the same time creates new Search results on these engines are recognised ones for others who can learn new skills in as credible sources of information for users, and increasing demand for innovations. Automation engines use several ranking signals to causes economic inequality, so employees need determine the positions of each website. to get new skills in order to survive in the digital (Lewandowski, 2013) While on search engines, era. Machine learning revolutionised the 91% of users think that they always or mostly technology market, and nowadays, 84% of find what they are seeking for on search marketing companies leverage machine engines, 73% of them always or mostly find the learning benefits and enhance their capabilities information reliable and accurate. (Purcell et al., in communication and services. Predicting 2012) The digital culture changed the trust consumer behaviour became more precise and apart from experts and in favour of faster by analysing historical activities of nonprofessional information sources such as consumers on websites, in retail shop centres search engines, blog and social media posts, etc. (Bayoude et al., 2018) search engines. (Park & Cho, 2012; Wolny&

Mueller, 2013). Therefore, after recognising this The implementation of Machine Learning consumer behaviour on search engines, technologies to the business environment gives advertisers began to impact purchase decisions more detailed analysis opportunities and gaps in different stages of the sales funnel which in communication and sales process. After represent the whole customer journey from defining business objectives on customer beginning the awareness of the need for the behaviour, predictive analytics contribute to the product to purchase. Research by Jansen et al., sales and marketing department with better (2007) revealed that more targeted search forecasts and trend reports using for data- results increase the performance of web search driven strategies. Predictive analytics provides engines and in the study, search intents were advertisers with behavioural analysis which classified as information, navigational and helps to understand technical, psychological transactional. The research also found that 80.6% and demographic parameters that affect a of search terms were used for information user's purchase behaviour determining their

wants, needs and personal preferences. The study analysed the efficiency of PPC Automated systems extract information from advertising in bringing new customers to the datasets and process them based on given company, and according to previous studies, it business objectives by the company itself. was proved that many companies still use PPC Therefore, data scientists should train their advertising to attract customers online during machine learning algorithm with the help of their research about products or services. In the specialists with domain knowledge of the field. shadow of current technological innovations, it is Machine Learning models are trained regularly undeniable that Smart bidding strategies and to get better results considering more patterns third-party automated campaign optimization and correlations to form ideal customer tools decrease human intervention and eliminate personas. Gartner anticipates¹⁷ that by 2020, human errors in the process of managing PPC almost 30% of companies will be utilising AI and campaigns. Existing third-party tools and machine learning in at least one of the sales competition between PPC management tools processes. The machine learning reforms on show the current demand of using automation advertising, email marketing, content creation tools for ad creation, reporting, monitoring and and social media create new opportunities optimization by PPC managers, However, it is while making many tasks automated questionable whether the intelligence of AI may and straightforward and reducing human consider the impact of characteristics of the participation. The main benefits of machine business and market changes on the advertising learning in digital marketing are as follows:

- Personalised solutions In the digital world, brands can distinguish themselves by the well-designed user experience on their websites, application or on social media channels. Machine learning increases the superiority of this experience by adding valuable data resources to the process. Personalised messages, call-to-actions, webpages, suggestions to the end-user create a direct-marketing effect and users recognise the customised experience and feel special care from the brand. Brands use this strategy on email marketing to create special messages and promotions to increase the attractiveness of their content. Netflix uses recommendation algorithms to validate their improvement plans with existing data to discover how users react to the recommendations in their journey through Netflix platform by implementing online A/B tests and analysing long-term behavioural patterns. Based on the analysis platform, personalised content offering, ranking, titles, page generation, searches, messages etc. and make them appealing and likely to enjoy over 100 million subscribed members.¹⁸

5. CONCLUSION

campaigns dynamically and apply changes by analyzing the market as PPC manager do. As AI and machine learning work with data, small businesses still should work on integrating their marketing activities and collect the data from different channels for better optimization. Additionally, it was founded that there is a risk for PPC management tools as Google regularly improve and educate the Machine Learning algorithms with more data and algorithm changes. Since the last requirements for Google Partners, recommendation feature makes Partners use Smart bidding strategies more often to meet the requirements and eventually, this provides ML with more experience. As a result, Google's Machine Learning models are improved and get a chance to give higher performance results or KPI achievements to advertisers. Smart bidding strategies were used by thousands of advertisers and made it easy to target users and optimize campaigns based on the target metrics – KPIs. Well-designed guidance for advertisers educates them on using the right KPIs based on their target and Machine-Learning support the optimization strategy. The variety of choices in terms of bidding strategies enabled PPC managers to enter different auctions, target different segments of users based on contextual signals and give control to Machine Learning to analyze and optimize historical performance after a certain learning period. Overall, 69 switching Smart bidding strategies and using

parallel experiments help advertisers identify their best performing approach to the campaign as case studies proved the efficiency of using these experiments. However, third-party custom internal PPC management tools are required as uncertainties exist for a business requiring dynamic changes and customized solutions. Uncertainties and having a lack of digital culture. Journal of Customer Behaviour, 14(2), 127-146.

may have trouble with optimizing campaigns for businesses which serve in a dynamic market environment and encounter unpredictable consequences. This study acknowledged the effectiveness of Smart bidding as many businesses leveraged this machine learning based advancements while finding gaps in the industry which was filled by agencies and third party service providers. Uncertainties always exist, and custom variables that affect performance metrics are required to be considered when managing advertiser accounts. In this case, the cases discussed in the study helped to describe current situation and opportunities to use custom solutions for businesses.

REFERENCES:

- Abdurrahim, M. S., Najib, M., & Djohar, S. (2019). Development of AISAS Model to See the Effect of Tourism Destination in Social Media. *Management (JAM)*, 17(1).
- AbouNabout, N., Skiera, B., Stepanchuk, T., & Gerstmeier, E. (2012). An analysis of the profitability of fee-based compensation plans for search engine marketing. *International Journal of Research in Marketing*, 29(1), 68–80
- Agarwal, A., Hosanagar, K., & Smith, M. D. (2011). Location, location, location: An analysis of profitability of position in online advertisement markets. *Journal of Marketing Research*. 48(6).1057-1073.
- Alphabet Announces Fourth Quarter and Fiscal Year 2019 Results - https://abc.xyz/investor/static/pdf/2019Q4_alphabet_earnings_release.pdf
- Anderson, C. (2006). *The long tail: Why the future of business is selling less of more.* Hachette Books.
- Arya, V., Sethi, D., & Paul, J. (2019). Does digital footprint act as a digital asset?
- Bartz, Kevin, Vijay Murthi, and Shaji Sebastian (2006), "Logistic Regression and Collaborative Filtering for Sponsored Search Term Recommendation" in Second Workshop on Sponsored Search Auctions in Conjunction with the ACM Conference on Electronic Commerce. Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.84.3825&rep=rep1&type=pdf> Accessed: 15/05/2020
- Bayer, E., Srinivasan, S., Riedl, E. J., & Skiera, B. (2020). The impact of online display advertising and paid search advertising relative to offline advertising on firm performance and firm value. *International Journal of Research in Marketing*. Available at: <https://www.sciencedirect.com/science/article/pii/S0167811620300094> Accessed: 15/05/2020

