

## SEARCH ENGINE OPTIMISATION: EVIDENCE FROM PAKISTAN

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### ABSTRACT

*This study has two objectives. The first objective is to investigate firm exploitation of search engine optimisation (SEO) techniques with respect to website traffic. The second objective is to report on the searching habits of Internet users. This study uses a qualitative descriptive approach that analyses 15 different case studies of business to business (B2B) and business to consumer (B2C) companies. These companies include nine banks, four telecommunication companies and two automotive companies. The in-depth, semi-structured interviews were administered by telephone and/or personal interviews. Additionally, a questionnaire-based survey was administered to Internet users to determine their web use and searching habits. The results demonstrate that firms are currently exploiting SEO at a limited level, that the use of social media is rare and that firms do not consider users' searching habits. This study also reveals that 84% of web users spend up to two hours daily searching the Internet. The dominant search engine (i.e., the engine used by 90% of users) is Google. The use of social sites such as Facebook, Twitter, MySpace and Orkut is high among users (i.e., 85%). This study highlights the opportunities that SEO provides to companies with respect to the use of their corporate website as a strategic marketing tool.*

**Keywords:** Internet marketing, search engine optimisation, social media, web usage, searching habits, Internet

### INTRODUCTION

The proliferation of low-cost Internet access has provided opportunities for companies to interact with millions of individual customers in a way that was previously unimaginable and only manageable through the use of intermediaries. Historically, firms used traditional media advertising channels such as television,

radio and print media. The Internet is a formidable media channel for advertising and offers technological advantages such as search engine marketing, interactive websites and external links. Internet marketing provides a unique competitive edge for forward-thinking companies. Internet traffic is increasing aily because of a decrease in the price of Internet communication (Aldridge, Forcht, & Pierson, 1997), therefore, nearly every business, whether large or small, B2C or B2B, currently maintains a website. Businesses invest large amounts of capital in online marketing with respect to online sales, online information, advertisements for offline purchases and customer relationship management (Matheison, 1998; McGovern, 1999; Sainoske & Durlow, 1998). In 2007, the overall online advertising expenditure was USD21.4 billion (Ghose & Yang, 2008). The reason for this substantial spending is the businesses' desire to create and maintain a competitive advantage (Wilder, 1999). Websites provide an opportunity to create and maintain relationships with mass customer bases and Internet users simultaneously and at a low cost compared to traditional media (Korgaonkar & Wolin, 2002). The marketers, through analysing website visitor click stream data, are able to obtain a complete picture of users that includes visitor information such as the pages viewed, the length of stay at a certain website, the products and services of interest, any marketing offers that appeal, and the items purchased (Deeter-Schmelz & Kennedy, 2002; Wilson, 2010).

The web technology is a pull technology (i.e., consumers visit websites to collect information; see Ho, 1997; Koh & Balthazard, 1997a, 1997b; Salam, Pegels, & Rao, 1997). Therefore, firms are eager to establish their visibility on the Internet to provide and promote products and services (Cheung, 1998). Similarly, transactions can be conducted (Hsieh & Lin, 1998), and firms can maintain competitive advantages (Bloch, Yves, & Segev, 1996; Brabston & McNamara, 1998; Jemmeson, 1997). Companies use several techniques to attract potential customers, such as banner ads, click-through functionality, pop-ups and external links. Today these companies have a recently recognised technique called search engine optimisation (SEO).

SEO is the process of designing a website to appear early in search engine result pages (SERPs) when a user conducts a related search (Ghose & Yang, 2008). SEO is an effective promotional Internet technique for products and services (Cahill & Chalut, 2009, New York Times, 2009). Companies that recognise the value of SEO are investing heavily in the technology. SEO comprised 18% of all search engine marketing (SEM) for 2007 (Ghose & Yang, 2008). SEM includes paid search engine advertising (“sponsored” advertising) and search engine optimisation (“organic” advertising) (Murphy & Kielgast, 2008). According to eMarketer, 46% of online retailers ranked SEO as the best promotional tool (Ghose & Yang, 2008).

There is not a business in the world that should not feel threatened by the Internet, but companies willing to become engaged should find big opportunities.

(Egan & Pollack, 1995, p. 82)

Companies attempt to differentiate their strategies, and SEO adoption offers the opportunity to gain a competitive advantage. Previous research demonstrates that 80% to 90% of Internet users turn to search engines such as Google, Yahoo and MSN for information searches (Enaceanu, 2007). Ninety percent of users are interested in the first two pages, and 80% examine the first five pages (Suchánek, 2008). Therefore, marketers consider it crucial that their website appear on the initial search engine results page (SERP) listings. To attain a top position in the SERP, the SEO technique is effective, free and simple to apply and provides targeted marketing (Enaceanu, 2007; Kennedy, K. & Kennedy, B. B., 2008). SEO involves using keywords, linkages and meta-tags to design a website in a way that ensures priority placement on the search engine results page (SERP) in organic or natural search listings.

Other resources for SEO technology include blogs, social networks, content communities, forums and e-mail campaigns. These resources are collectively referred to as social network media (Constantinides & Fountain, 2008). Social networks are reaching an apex in terms of their usage. There were 133,000,000 blogs indexed from 2002 to 2008 (Sifry, 2008). According to comScore (2010), Facebook had 200,000,000 unique visitors in the month of December 2008 alone. Another study (Lenhart, 2009) indicated that adult participation (over the age of 18) in social networks rose from 8% in 2005 to 35% in 2008. These networks have facilitated global, real-time communication and have a significant and substantial degree of autocorrelation in customer-level revenue (Haenlein, 2010). Many companies have developed blogs and online forums to place their brands at the centre of a community. For example, Starbucks is present on Facebook and Twitter and has its own YouTube channel and online community website (Palmer & Lewis, 2009). The role that social networks can play with respect to search engine optimisation (SEO) is related to the automatic system that search engines use to retrieve results and rank websites. These automatic systems use robots/crawlers that retrieve results from the Internet and simultaneously analyse a website's performance and its presence in social networks. Based on the content, site design, site performance and site presence in social networks, these crawlers rank the site in a search engine results page (SERP). Thus, those websites that are most frequently discussed and visited or that have their content present in forums, blogs, and social sites (Facebook, Twitter, Orkut) are ranked higher than those that do not have a presence in social networks.

In Pakistan, the licensing of commercial Internet service providers began in 1996. By mid-1999, the licenses to provide Internet services were issued to approximately 100 organisations. By mid-2000, there were 500,000 Internet users in Pakistan. In 2005, the number of Internet service providers had surpassed 2000, and the number of Internet users increased to a total of 10.5 million. In 2008, the number of Internet users reached 18.5 million<sup>1</sup>. More people from all backgrounds are using the Internet daily. It is an indispensable tool for academics, experts, and business professionals. Search engines are used by many to find necessary information concerning products and services, and an opportunity exists for the Pakistani business community to take advantage of this medium. Sectors such as banking and telecommunications should adopt this technology to maintain a competitive edge. The banking sector of Pakistan is playing a pivotal role in the country's economic growth. As of June 2010, the banking sector was composed of 36 commercial banks (including 25 local private banks, 4 public sector commercial banks and 7 foreign banks) and 6 Islamic banks<sup>2</sup>. These banks have significantly improved banking technology with the introduction of services such as Internet banking, ATMs, and mobile phone banking/branchless banking. Certain banks attempt to dominate the market by offering financial incentives such as loans, car leasing and car financing on lenient terms. Such leasing and financing of automobiles has led to competition in the automotive industry. However, the telecommunications sector in Pakistan has also witnessed an economic and financial boom in recent years. In 2011, the teledensity of the country reached 68.39%, an increase of 6.7% from the previous year, and the telecom sector contributed over Rs. 116.9 billion to the national income<sup>3</sup>. The number of mobile users reached 108.9 million in 2011 (a growth rate of 10%), and significant competition exists in the Pakistan telecom sector. Telecommunication companies are investing substantially in marketing media to attract users and to continue to develop new strategies to create and maintain a competitive edge.

The Pakistani business community does not fully understand the concept of SEO. Only a few companies that recognise the importance of SEO are incorporating SEO techniques to gain a competitive edge. In the current technological era, creating a website is not sufficient because millions of new websites are uploaded daily. The goal must be to attract users to a particular site. With over one billion websites listed on search engines, SEO offers a way for a company to ensure that customers find their particular site. This study will broaden the understanding of SEO by business individuals and demonstrate its significance.

This study has two objectives. The first objective is to investigate the SEO techniques of businesses in their attempts to increase website traffic. The second

objective is to explore the web usage and searching habits of Internet users. The main objective of the investigation into SEO exploitation is to explore the level of awareness and expertise of this strategic marketing tool among industries. Similarly, by analysing the users' web usage and searching habits, the study can determine whether local businesses have an opportunity to attract mass users to their websites.

## **THE LITERATURE CONCERNING SEARCH ENGINE OPTIMISATION (SEO)**

To date, there is limited literature with respect to SEO. Certain descriptive and empirical studies have been conducted in this field. For example, Kharbanda (2006) discussed several web advertising techniques that companies can use to attain priority placement on search engines. Rimbach, Dannenberg and Bleimann (2007) demonstrated the ways in which companies can use their operational knowledge to attract customers. Similarly, Evans (2007) presented the most popular techniques to increase web page visibility with respect to Google searches. In one developmental study, Enaceanu (2007) provided search engine optimisation techniques for business websites. However, Murphy and Kielgast (2008) investigated small- and medium-sized hotels and the search engine marketing (SEM) strategies used to increase traffic to their websites. Ghose and Yang (2008) compared sponsored search advertising with organic listings in terms of conversion rates, order values and profits from a keyword advertisement. The significance of SEM techniques in e-business is discussed by Suchánek (2008). Cahill and Chalut (2009) discussed the “white hat” and “black hat” practices of optimisation and their impact on the results pages of search engines. Katona and Sarvary (2010) discovered an interaction between a list of organic results and a list of sponsored links on SERP and explored the inherent differences in attractiveness between sites. Yang and Ghose (2010) estimated the interrelationship between organic and paid search listings using a unique panel dataset based on several hundred keywords.

## **RESEARCH METHOD**

The study includes 15 case studies that are composed of different B2B and B2C companies. These companies included nine banks, four telecommunication companies and two automotive companies. In-depth, semi-structured interviews were administered by telephone and/or personal interviews. Murphy and Kielgast (2008) adopted the same approach to investigate the exploitation of SEM by small- and medium-sized hotels. The specific questions related to SEO

exploitation were constructed. The data were scrutinised by inspection and reported as summary information (Table 1), in addition to the quotes and opinions presented in a descriptive format. The names of the respondent companies were not disclosed and are referred to by the letters A to O.

A questionnaire-based survey was conducted among Internet users to analyse their web use and searching habits. The Internet users included male and female academics, experts and business professionals. The survey instrument was designed to measure the users' web usage and searching habits. Items used in prior studies (Alwitt & Prabhakar, 1992; Ducoffe, 1996; Eighmey, 1997; Korgaonkar & Wolin, 2002) were reviewed in the construction of the instrument. The instrument was presented to the three experts who had extensive research experience. The three experts are the faculty members of Iqra University, Islamabad Campus. All possess PhD degrees and have published articles in international journals. Based on their recommendations, the instrument was revised and finalised. Certain demographic information that included gender, age, occupation and education was also collected. The questionnaires were distributed to 500 users. A total of 425 questionnaires were completed by the users. The response rate was 85%. After analysing the completed questionnaires, a total of 404 questionnaires were included in the study. The respondents included students, professionals and other Internet users.

## **RESULTS AND DISCUSSION**

### **The Company Survey**

All of the interviewees maintained a website. However, the websites are rarely the responsibility of a marketing manager but are instead managed and updated by the IT department. Table 1 reveals that of the 15 respondents, 9 respondents used SEO at a limited level and only two respondents exploited SEO at a strategic level (e.g., "SEO is critical", "keep the content relevant and related to the keywords", "SEO is a very important part of our Internet marketing", and "being we are isolated, it is important to be visible on the Internet").

The results are similar to the findings of Murphy and Kielgast (2008), which also demonstrated that SEM in general, and SEO specifically, are not used at a strategic level by most respondents. One respondent in this current study stated that "we use the services of a third party for SEO exploitation". Two respondents stated that they run a B2B business and have no need for SEO (i.e., "it very important – but we have regular clients and we do not need SEO optimization",

“SEO not necessary – we rely on the destination”, “we have considerable local presence”).

Table 1  
List of companies

Company	Industry	SEO	Social Media
A	Banking industry	Keywords	Social sites
B	Banking industry	Meta tags	Social sites, forums, blog
C	Banking industry	Keywords	None
D	Banking industry	Keywords	None
E	Banking industry	None	None
F	Banking industry	Keywords	Blog
G	Banking industry	Keywords	None
H	Banking industry	None	None
I	Banking industry	None	None
J	Telecommunication industry	Outsourced	None
K	Telecommunication industry	Meta tags	Social sites, forums, blog
L	Telecommunication industry	Keywords	Social sites, forums, blog
M	Telecommunication industry	None	None
N	Automotive industry	None	None
O	Automotive industry	None	None

Note: There are 15 respondent companies

The proliferation of the Internet has resulted in an increase in B2B Internet marketing (Avlonitis & Karayanni, 2000). Certain studies demonstrate the importance of Internet and website design as a B2B communication, sales, and customer relationship management (CRM) tool (Chakraborty, Srivastava, & Warren, 2005; Day & Bens, 2005; Deeter-Schmelz & Kennedy, 2004; Wilson, 2010). SEO is therefore a necessary and useful tool that can help a B2B company reach mass users through their website. One respondent reported, “We realise its importance and we are going to use SEO techniques.” Another respondent reported, “We have keywords and meta tags but do not update them.”

Table 1 reveals that the use of social media (e.g., forums, social sites and blogs) is rare among the companies in the sample. Of the nine respondents who claimed to exploit SEO exploitation, four of those respondents do not use any social network media (e.g., forums, social sites and blogs) but rely on updating their websites. One company has social sites only, and three have forums and blogs in addition to social sites. One company has a blog only. The respondents were asked whether they consider the search habits of Internet users in their

exploitation of SEO techniques and all replied in the negative. These companies do not attempt to ascertain how users conduct a particular search, which search engine is more popular, how they write a query, and how many result pages they view. Moreover, the use of web analytics software is rare.

A website's usability and performance is a concern for marketing executives. Because websites may lack effectiveness (Nielsen, 2000, pp.14-15), evaluating the specific design of each webpage is required to determine how well it is performing. A click-stream data analysis using analytics software provides information with respect to visitor sources, such as referring sites, direct visits, and search engines. This type of software also provides data concerning keywords used by the visitors to search a particular query. Five respondents stated that they use Google analytics. Analytics software facilitates the optimisation of company websites to improve placement in search engine results pages (SERPs).

### **The Users' Survey**

Data were collected from academics, experts, and business professionals. Internet users only were selected to participate in the study. The sample consisted of males (82%) and females (18%) who were primarily students (54%) and professionals (31%), with most individuals being between 20 and 30 years of age (76%). Table 2 presents the sample characteristics.

The purpose of exploring the web use and searching habits of the users is to demonstrate that an increasing number of users are utilising the Internet and search engines. The study explores search engine usage, the most popular search engines, the keywords used in search queries, and how many results pages are typically viewed. The use of social media is also examined. This type of information can facilitate an improved company SEO strategy to increase website traffic. Table 3 demonstrates that 46% of the respondents spend approximately 1–3 hours daily on the Internet. Most of the respondents use the web during the evening hours (36%) and at night (34%). Forty-nine percent of respondents use the Internet seven days a week, and 22% use the Internet over the weekend. Twenty-eight percent of users use the Internet during the week (Monday to Friday). The users were surveyed with respect to website choice, and 64% responded that they frequently searched for a site(s) that was new, different or better.

Table 2  
Sample characteristics

Characteristics	Percent (%)
<b>Gender</b>	
Male	82
Female	18
<b>Age (years)</b>	
Under 20	6
20 to 30	76
31 to 40	15
41 to 50	2
51 to 60	1
Over 60	-
<b>Education level</b>	
High school	2
Technical school	2
Some college	12
College graduate	37
Post graduate	47
<b>Occupation</b>	
Managerial	5
Professional	31
Technical	5
Student	54
Other	5

Note:  $n = 404$

Table 3 reveals the social media use among the users. It demonstrates that 10% of Internet users engage in blogging (i.e., they author a blog), whereas 11% only read. Thirty-five percent of users contribute to online discussion forums. The use of social sites such as Facebook, Twitter, MySpace and Orkut is high among the users (i.e., 85%). B2B and B2C marketers must realise the importance of this media and take advantage of the opportunities offered by SEO technology. Blogs can facilitate the sharing of information with respect to goods and services. Similarly, each update on a company website can also be shared on social sites. Customers have evolved from the traditional to the social customer and are connected via mobile devices to the Internet and their peers. Customers expect

information to be available on demand and possess the tools and desire to simultaneously share received information and socialise with those trusted peers, regardless of whether they are personal acquaintances (Greenberg, 2010). Social sites provide the strategies and tools that can provide new levels of customer insight – the type of insight that allows customers to personalise their interactions and experiences (Pine & Gilmore, 1999). The interactions between companies and customers and between customers with their peers can facilitate the improvement of company website content and can raise website priority in search engine placement.

Table 3  
*User web use habits*

<b>Statement</b>	<b>Percent (%)</b>	<b>Statement</b>	<b>Percent (%)</b>
<b>Hours spent per day on the Internet</b>		<b>Day of week usage</b>	
Zero hours	1	All seven days	50
Less than 1 hour	15	Weekends	22
1 to 3 hours	46	Weekdays (Monday to Friday)	28
3 to 4 hours	14	<b>Website choice</b>	
4 to 5 hours	8	Only visit the Websites you know you like	36
5 to 6 hours	9	Surf the Internet frequently to search for a site(s) that is new, different or better	64
6 to 10 hours	5		
More than 10 hours	1	<b>Social Media</b>	
<b>Time of the day usage</b>		Author a blog	10
Morning hours	17	Read a blog	11
Afternoon hours	12	Forum discussion	8
Evening hours	36	Social sites such as Facebook, Twitter, Orkut, Myspace	71
Night time	34		

Note:  $n = 404$

This study also explored the searching habits of the respondents. The results demonstrate that 40% of respondents spend between one and two hours daily using search engines and that 44% spend less than one hour each day using search engines (Table 4). This information demonstrates that these users represent potential customers for companies. The results also demonstrate that

41% of respondents frequently search for the product/service information before purchasing. Sixteen percent of users searched frequently, and 27% sometimes searched for product/service information.

Table 4 depicts that ninety percent of respondents use Google for searching. This result supports the findings of Dudek, Mastora and Landoni (2007), that Google is the most widely used search engine. Similarly, certain studies demonstrate that Google is the dominant search engine (Robinson & Wusteman, 2007) and is superior in coverage and accessibility (Brophy & Bawden, 2005). Six percent of respondents use Yahoo. This is significant information for companies because it reveals the search engines that are most popular among users and allows companies to employ specific SEO techniques for that particular search engine. Most respondents write a query in their natural language (63%). Twenty-two percent of respondents use single keywords (e.g., the product or company name). The results pages of particular queries demonstrate that 75% of users do not venture beyond the first three pages. Twenty-four percent view the first page, 22% view the first and second pages and 19% view up to three pages. This finding implies that the majority of users do not like to navigate several pages of the search engine results. Although they may obtain the relevant information from the first three pages, the results demonstrate that users limit their attention to the first three pages, regardless of whether they obtain the relevant information. Only 25% of users venture beyond the third page of search engine results. Therefore, companies should realise the significance of priority listing of their sites on the SERP in attracting mass users.

## **CONCLUSION AND RECOMMENDATIONS**

Search engines play a significant role in attracting a large number of users to business websites. Search engines have increased in popularity to the extent that more than 50% of all website visitors originate from a search engine (McCarthy, 2006). Search engines serve over 130 billion monthly user queries (comScore, 2010). The results of this study demonstrate that companies have an opportunity to increase their website traffic. The adoption of SEO is increasing, but there is still a lack of expertise. The use and frequent updating of valid keywords and meta-tags are necessary, but additional factors can enhance the effectiveness of the SEO technique. The use of social media is significant and useful in increasing website placement on SERPs; therefore, companies must use this resource. The concept of SEO is not fully established among the Pakistani business community, which would benefit from a deeper understanding of the effectiveness of this tool. An understanding of the search habits of users can facilitate effective SEO techniques. Four popular search engines, i.e., Yahoo,

Google, MSN (Bing) and ASK, were included in the survey instrument to analyse Internet users' preferences.

Table 4  
User search habits

Statement	Percent (%)	Statement	Percent (%)
<b>Hours spent per day on search engines</b>		<b>Search engine used</b>	
Zero hours	3	Google	90
Less than one hour	44	Yahoo	6
1 to 2 hours	40	MSN(bing)	1
2 to 3 hours	4	ASK	.002
3 to 4 hours	4	Other	3
4 to 5 hours	3	<b>Query writing style</b>	
5 to 10 hours	.24	Use Boolean operators	8
More than 10 hours	0	Write a query in natural language	63
<b>Product/service information search</b>		Write single keyword	22
Very frequently	16	Other	3
Frequently	41	<b>Result pages viewed</b>	
Sometimes	27	1 only	24
No	2	1 and 2 only	32
Never	4	Up to 3 pages	19
		Up to 5 pages	15
		More	10

*n* = 404

Google is the dominant search engine; therefore, companies can use specific techniques, such as those presented by Evans (2007), which can raise their website visibility with respect to Google. Similarly, Enaceanu (2007) also presented useful SEO techniques for business websites that include submission of websites to search engines and web directories (DMOZ directory), site design, and content validity. Companies may use social media for search engine optimisation because they play a significant role in improving website placement in SERP. Additionally, conducting a survey among Internet users to ascertain the keywords used in particular product or service searches can enable the application of these keywords to company websites. Google provides keywords for websites, but these are typically generalised keywords and may be different when applied to a specific local ethnicity. To attract a specific target audience to a specific brand, it is necessary to understand that particular target's web use and searching habits. Understanding the behaviour of users can facilitate company

site optimisation. Therefore, it is advantageous to first understand the search habits of users before attempting to optimise a website.

## **PRACTICAL IMPLICATIONS**

This study highlights the opportunities that exist with respect to SEO exploitation for companies. The study reports that there is opportunity for marketing executives to attract mass users through SEO strategies. Similarly, the study provides resources that can facilitate effective SEO. This study is valuable for business professionals, especially those in Pakistan, and facilitates the understanding and realisation of the importance of SEO.

## **FUTURE RESEARCH**

This study analyses SEO adoption by companies and reports on Internet usage, searching habits, and the use of social media. Future empirical studies can establish a relationship between users' searching habits and companies' exploitation of SEO techniques. The cost implications can also be included in such an investigation. Future studies might investigate the possible benefits or drawbacks with respect to company adoption of SEO strategies.

## **NOTES**

1. Public Data, available at <http://www.google.com/publicdata>
2. A report compiled by Aslam Pervez, Commercial Officer Consulate General of Switzerland in Karachi. Download from <http://www.osec.ch/sites/default/files/PakistanBankingSector2011.pdf>
3. Annual report of Pakistan Telecommunication Authority. Download from [http://www.pta.gov.pk/annual-reports/pta\\_ann\\_rep\\_11.pdf](http://www.pta.gov.pk/annual-reports/pta_ann_rep_11.pdf)

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