

Relationship Analysis of Website Traffic, Domain Age, and Google Indexed Pages of E-commerce Websites

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Abstract

Increasing popularity of online business (E-commerce) and website users plays an important role in changing business scenarios. The success of the online business is much dependent on the traffic (website traffic) that the E-commerce websites can pull in. Discovering the relationship between website traffic, domain age, and Google indexed pages can help the E-commerce sites to plan their actions to accommodate growth and dominance on the web. Though designing the right strategy to capitalize online market in a specific category is vital, due to increasing competition and changing trends it becomes challenging. Exploring the trends in strategies for pulling in traffic by categories of websites can further help the online business firms to understand the segment tactics for their business. In this paper, Multiple Linear Regression Analysis is used to identify the effect of domain age and Google indexed pages on Total Monthly Page Views. The data was gathered from web analytics tools such as Similar Web, Small Seo Tools, and Pingler on 60 conveniently picked websites from India. The study deployed ANOVA for exploring the differences in average paid search traffic, social media traffic, mail traffic, referrals traffic, and display traffic with respect to website categories. The results thus obtained clearly demonstrate that domain age and Google indexed pages

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have a weak impact on website traffic but there is a significant difference in average organic search traffic, paid search traffic, social media traffic, and referrals traffic with respect to website categories.

Keywords: Website traffic, Google Indexed Pages, Domain Age, Paid Traffic, Organic Traffic

1. Introduction and Background

The World Wide Web (WWW) and its usage are constantly growing. Business firms have to value the considerable rise in the number of internet users, growing acceptability of online payments, the proliferation of Internet-enabled devices and favorable demographics are the key factors driving the growth story of E-Commerce (Upasana & Rebello, 2014) in India. As online business grew faster, the competition increased on the Internet (Tilahun, 2013) with diverse net warfare techniques (Demetew & Ayalew, 2011). With World Wide Web, business enlarged the growth possibilities and opened up new opportunities. There is no doubt that internet and E-Commerce have become a major tool to gain competitive advantage (Esichaikul & Chavananon, 2001).

As noted by Huff et al. (1999) the web traffic of a website increases and offers popularity to E-Commerce operations. The studies on web activities had shown proven methods of creating web traffic to a website. Search Engine Marketing is a popular method today for promoting websites to increase web traffic (Al-Badi et al, 2011). There is a popular belief among the bloggers and web marketers that older domains do better in search results and are given extra favor due to their age (RapidWebSeo, 2014). Some also believe that the number of Google indexed pages can also impact the flow of visitors to a website. The role of indexed pages (Getahun, 2014) in bringing in new traffic cannot be undermined (Tilahun, 2013). Search Engine Marketing is incomplete when one undermines the importance of Google indexed pages.

However, domain age and Google indexed pages, and their effect on website traffic is a matter to be analyzed in the Indian scenario. When some of the scholars thoroughly argue that the number of indexed pages can bring more traffic to a website, some others argue that there exist no direct relation between the number of indexed pages and the amount of traffic you receive (XDRange, 2013). If it is not the domain age and the number of indexed pages, it could be the paid promotions (Demetew & Ayalew, 2011). Any traffic that is paid to obtain

(Elder, 2015) can be considered as paid traffic. Though the major share of website traffic through search engines originates from organic (natural) rather than sponsored (paid) links (Baye et al, 2014), we cannot underestimate the role of referrals, paid searches, social media ads, and display ads.

Thus this study was aimed to understand the relationship between total monthly page views, domain age, and Google indexed pages. We also devised the study to analyze and identify the difference in search traffic, social media traffic, mail traffic, referrals traffic, display traffic, and direct traffic.

Domain Age

Domain age is almost synonymous with the website age, though they are not the same. According to Brick Marketing (2014) domain age refers to the length of time that a website has been registered and active. Smarty (2008) opines that website age (and its back link profile age) is what really matters. It is noted that old domains do have importance but when an established domain is resold it changes its value as the content and style of operations change. Yet again, it has to be noted that Google records the date on which a domain is registered. Google uses domain name data for improving their search algorithms and this surely indicates that the search results can be influenced by the domain age.

Google Indexed Pages

A website's contents to be the part of search results, they have to be included in the search engine's index like Google index, Bing index, etc. The page index is similar to an index in a library, which lists information about all the books the library has available (Google -a, 2009). As a visitor searches Google or a similar search engine, the search is performed on the Google index rather than the web (WWW). Most large-scale web authoring and indexing programs (Browne and Jerney, 2004), such as for Google and Bing, use specific algorithms and procedures that allow concentrating on web content and provide the most appropriate results as a user searches. This also means that to have website's rank within Google, one must make sure that the site is in Google's index (Cashman, 2013).

According to Hines (2012) when indexing, the information provided on a website is gathered by is gathered by Google bot from its crawling activities. Google bot is Google's web crawling robot and crawling is the process by which Google's bot discovers new and modified pages to update the Google Index (Google -b, 2009). Google also offers an index status report that gives data about the URLs

that Google tried to index (Google -c, 2009). However, there are different ways to make a website noticed by Google bot. Creating sitemaps and submitting it to search engine's webmaster tools is one of the most significant techniques.

Total Monthly Page Views

A page view or a page impression is an instance that an internet user visiting a specific page on a website (Johnson, 2015). A website can have many visitors and the total number of unique visitors to a website during a specific period is termed as total visits. Every visitor may view one or more pages of a website. Page views per visit represent the average number of page views per visit over a given time period (Johnson, 2015). Finding the product of total visits during a month and average page views during that month can give us total monthly page views. There are many factors that can influence a website's total monthly page views (Tilahun, 2013) which may include Google indexed pages, domain age, paid promotions, etc.

Traffic from Search Engines

Traffic is the key to the success of most websites (Information Resource Management Association, 2012). Visitors from search engines account for the major share of any website's traffic. Search engine traffic or search traffic implies to the visitors who reach at a particular website by clicking the results of their searches. When a website shows a high volume of search traffic, it is generally a positive thing for that website (Technopedia, 2012). A website's search traffic includes organic search traffic and paid search traffic.

Organic search results or natural search results are links resulted by a search engine that most closely match the user's search query based on relevance (Dummies, 2011). Organic traffic or organic search traffic is the flow of visitors from search engines to a website without spending on getting the traffic by the website. Organic traffic deals directly with Search Engine Optimization (Macey, 2016). the major share of website traffic through search engines originates from organic (natural) rather than the paid links (Baye et al, 2014).

Another way of obtaining traffic is through the paid links that appear in top or side ads (Baye et al, 2014). The website owners cannot influence the position of links and style of links when it comes to the organic search results. However, the website owners can sway the position links which are displayed in the case of paid listings. The traffic originated from search engines after paying for it is generally termed as paid search results of paid search traffic.

According to Brecht (2014), both organic search results and paid search results have unique advantages and disadvantages to them. When organic search's benefits include trust and credibility, ranking, and economic benefits, paid traffic is quicker and they can be focused on a target group of viewers. Selection of choice between organic and paid depends upon the organization. The types of web business can also influence the choice between organic and paid (Demetew & Ayalew, 2011) results.

Direct, Referrals, Social, Mail, and Display Traffic

When thinking off from the search engine traffic, websites have many choices still. Though search engine traffics account a major share in most cases of websites, direct traffic cannot be underestimated. This is the traffic that is generated without the intervention of any referring sites. Visitors through direct traffic manually enter the URL of the website or have it bookmarked (Macey, 2016). Though direct traffic does not use a referral site, it cannot be assured that the traffic completely free from paid sources (Getahun, 2014). Direct traffic can be obtained through paid promotions such as advertisements other than online advertisements, existing customers, employees, bouncing back visitors, etc.

Referral traffic is quite different from that of the direct traffic in a way that the referrals are a sort of recommendations from a different site other than search engines to a specific website. As a visitor clicks on a hyperlink to go to a new page on a different website, the action is considered as a referral visit (Bashara, 2012). Many websites such as amazon.com use the tactic of deploying referrals to bring in their visitors. As narrated by Demetew & Ayalew (2011), the utilization of referral sources can also be based on the category of website.

When websites use social sources such as Facebook, Twitter, YouTube, and similar to pull in traffic, the traffic generated is regarded as social traffic. According to Josh (2013), almost 26% of traffic is generated from social sources. Interestingly, those who spring in from social sources may or may not know what site they are landing on (Josh, 2013). Similarly, the direct marketers' most favorite tool is e-mail marketing (Willcocks, 2015), which ultimately brings in mail traffic. According to Wainwright (2013), when campaigning through e-mail marketing, the campaign is expected to include a link in that email which inspires and lead recipients to a specific website. The purpose of pulling in traffic could be to read more content, or to convert a reader to a buyer, or to take an action. Email is not dead, nor will it be anytime soon (Newman, 2015), and that makes traffic from emails important too.

Display traffic or display advertising traffic includes the visitors who reach a particular website from display advertisements online. According to Similar Web (2014), it is not easy to keep track of different display advertisement campaigns, especially if they're spread out among multiple platforms and websites. However, there are analytical tools including Similar Web to study the traffic flow from display ads. There are many factors that affect the success of a display ad in generating traffic, including the attractiveness, position, and size.

2. Significance

There are studies performed on similar areas by many scholars and academicians to explore the factors that can influence the traffic of websites. Some of the researchers like that of Al-Badi et al (2011) had shown the importance of search engine optimization and marketing. However, most of these researches were conducted either from the search engine point of view or from customers' point of view. In this study, we are trying to identify any significant relationship between the traffic, domain age, and Google indexed pages. The study also evaluates the difference in traffic behavior between the categories of websites. By emphasizing on Indian websites, the study is able to localize the scenario and is relevant for E-marketing professionals and E-commerce firms. Having knowledge about the traffic differences between categories, and the relationship between traffic, domain age and Google indexed pages can help practitioners plan and strategize their online presence while for academicians this can offer relevant information for understanding the web behaviors and characteristics of the traffic.

3. Methodology

There are many users, webmasters, and scholars who believe that domain age and indexed pages do have a greater role in attracting high volume traffic to a website. For this study, we are using data related to conveniently select 60 Indian websites to analyze the relationship between total monthly page views, domain age, and Google indexed pages. The study tried to describe the differences in traffic flow from paid and unpaid sources with respect to different categories of websites.

The data was collected from Similar Web¹, Small Seotools², and Pingler³ with respect to the 60 selected Indian web pages from different categories. The websites were categorized into shopping, news, banks, and others to study the differences

¹ <https://www.similarweb.com/>

² <http://smallseotools.com/domain-age-checker/>

³ <https://pingler.com/seo-tools/tools/google-indexed-pages-checker/>

in traffic behavior. The research used cross-sectional study design and data analysis.

Similar Web, Small Seotools, and Pingler are free analytical service providers from where the researcher could extract the needed data regarding selected Indian web pages using their report fields. Though there are other sources for such data, either those tools are paid or they may not have all the relevant data that the research required.

The data thus collected were analyzed to answer the following questions:

- Is there a statistically significant relationship between total monthly page views, domain age, and Google indexed pages?
- Based on website categories, is there a statistically significant difference in average Organic search traffic, Paid search traffic, Direct traffic, Referrals traffic, Mail traffic, Social media traffic, or display ads traffic?

The study used multiple linear regression to analyze the relationship while ANOVA to perform analysis of variances.

4. Findings and Results

To enable a common platform, websites with less than a million monthly unique visits were replaced with those websites that possess 1 million or higher traffic during the month of July in 2016. The websites that could not produce data in any of the variables were removed and only those websites with complete data were included. However, there were no restrictions planted on any other variables other than website traffic.

The relationship between Monthly Page Views, Domain Age, and Google Indexed Pages

After analyzing 60 cases, it was noted that the average monthly page views of all the websites were 184.25 million views, the average domain age was 13 years and 8 months, and the average Google indexed pages were 2 million 790 thousand pages.

The results obtained from the multiple linear regression shows an R-value of 0.439 at a p-value of 0.002. This indicates that the relationship is statistically significant though it is not so strong by nature. The R-square value obtained

from the analysis (0.193) indicates that 19.3% of the variability of the dependent variable (Monthly Page Views) is accounted by the changes in the independent variables (Domain Age and Google Indexed Pages).

Table 4.1 Regression Analysis Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.439 ^a	.193	.164	252.69305

a. Predictors: (Constant), Google Indexed Pages, Domain Age

b. Dependent Variable: Total Views

The correlation matrix shows that the correlation between Domain Age and Monthly Page Views is insignificant at a p-value of 0.409 while the correlation between Google Indexed Pages and Monthly Page Views is significant (p-value of 0.000) with a moderate strength (R = 0.437).

Table 4.2: Correlations Matrix

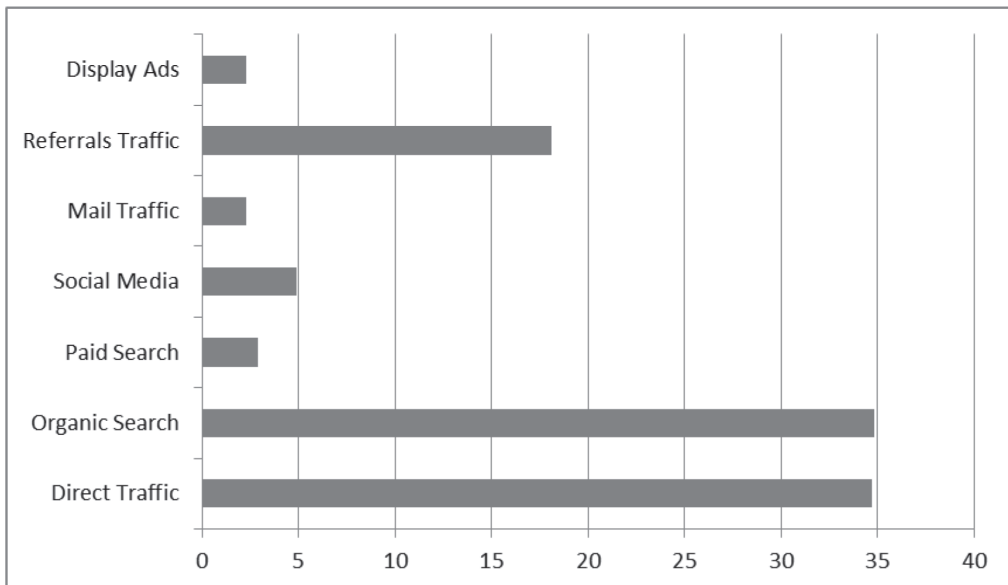
		Total Views	Domain Age	Google Indexed Pages
Pearson Correlation	Total Views	1.000	-.030	.437
	Domain Age	-.030	1.000	-.154
	Google Indexed Pages	.437	-.154	1.000
Sig. (1-tailed)	Total Views	.	.409	.000
	Domain Age	.409	.	.120
	Google Indexed Pages	.000	.120	.
N	Total Views	60	60	60
	Domain Age	60	60	60
	Google Indexed Pages	60	60	60

This indicates that when Google Indexed Pages has a low to moderate impact on Monthly Page Views, Domain Age has no significant role in bringing in page views. However, there could be other factors that may interfere the relationship between the variables such as the type of website, quality of content, and others.

Traffic Flow Behavior Based on the Website Categories

After analyzing 60 cases of Indian websites through Similar Web, it was noted that the average monthly direct traffic accounted for all the websites comes to 34.7%, the average organic search accounted 34.8%, the average paid search traffic recorded 2.9%, the average social media traffic showed 4.9%, the average mail traffic accounted for 2.3%, the average referrals traffic pulled in 18.1%, and the average display ads traffic recorded 2.3%.

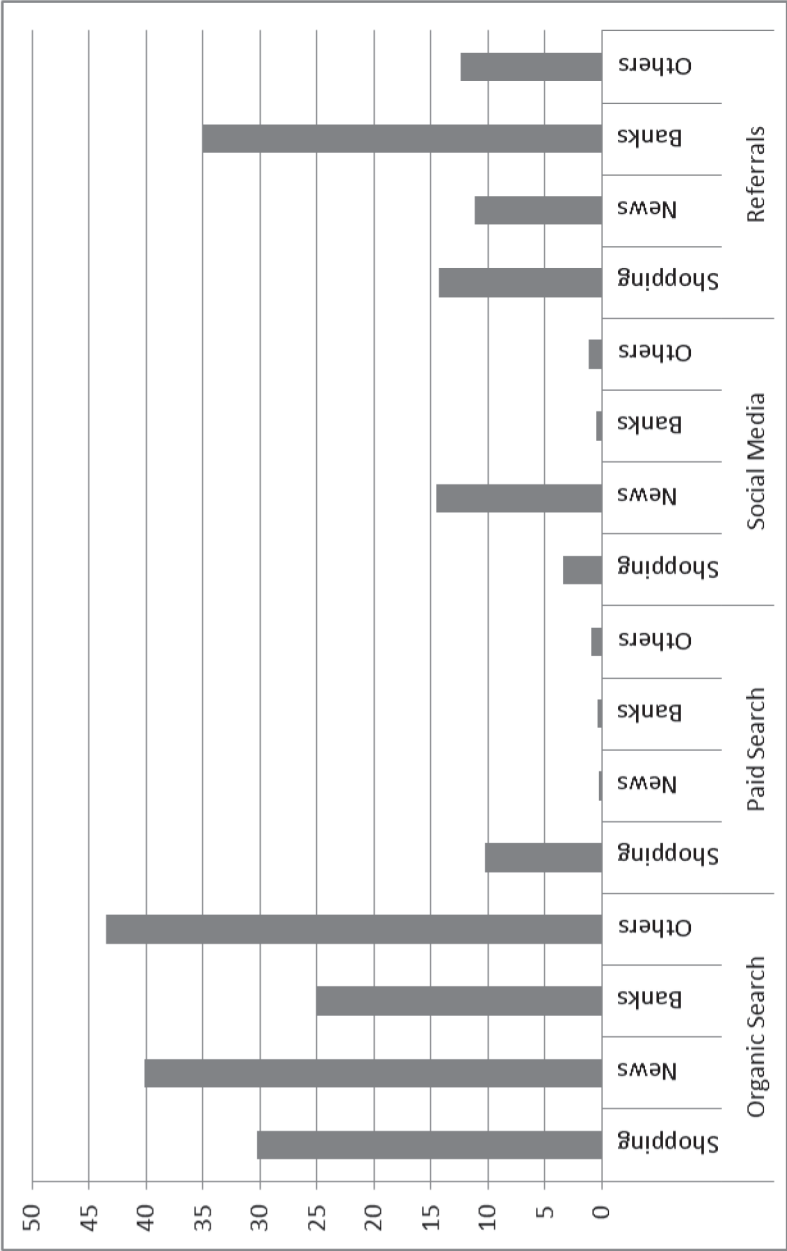
Figure 4.1: Average Web Traffic from Different Sources Expressed in Percentage



The analysis shows that the major share of traffic is accounted to Organic search and Direct Traffic. While Organic Search and Direct Traffic together account for 69.5% of the total traffic, the third major source (Referrals Traffic) records only 18.1% of the total flow.

On performing ANOVA on the variables, it is noted that there is no statistically significant difference in the share of traffic pulled by Direct Traffic, Mail Traffic, and Display Ads Traffic at 95% confidence level (p-values obtained were 0.648, 0.707, and 0.116 respectively) with respect to website categories. However, Organic Search, Paid Search, Social Media, and Referrals Traffic recorded significant difference (p-values 0.041, 0.000, 0.000, and 0.000

Figure 4.2: Average Web Traffic from Sources Based on Website Categories



respectively) in bringing traffic to the websites based on website categories. These differences may be due to the online marketing strategies adopted based on the consumer behavior to tackle competition within the category.

The variation in traffic flow from different sources based on website categories may indicate that the strategies adopted by websites from different categories used differently to tackle their online marketing environment.

5. Discussion

Based on the research findings its evident that the domain age has a significance in pulling traffic to the websites. However, gaining more Google indexed pages can control and influence the web traffic even to the new websites. Creating quality contents regularly and getting those contents indexed on search engines can help websites to establish a higher ranking on search outcomes and thus obtain higher traffic flow. For gaining the right viewers on the website, companies need to focus on creating custom pages and posts for those target audience.

6. Implications

While domain age and Google indexed pages has a positive correlation with the website traffic, it is also to be noted that the current Search Engine Optimization Practices and Content Curation practices can tweak the traffic behavior. A detailed study on search engine optimization and author-reader analysis can help to understand the traffic tendencies. However, the digital world is so swinging that regular studies are required to sketch relevant information.

7. Conclusion

This paper dealt with analyzing the relationship of Monthly Page Views with Domain Age and Google Indexed Pages while assessing the traffic flow behavior based on website categories. The results obtained show that Google Indexed Pages has a statistically significant relationship on Monthly Page Views with a low to moderate strength. However, the relationship between Domain Age and Monthly Page Views was identified as insignificant. This relationship can also be influenced by extraneous variables such as the category of website, quality of content, and others.

The categories of websites did show significant influence in the strategies adopted

by the websites to select sources of traffic or the nature of visits that came in for those sites. The possibility of altering the sources of traffic and choosing the best combination to get the right visitors cannot be neglected by the website owners. Studies such as quality analysis, customer choice, content analysis, and location effects can be conducted in continuation to this research for helping web professionals in streamlining the online business activities and for students in understanding the web behaviors and characteristics of the traffic.

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