

# Providing a Model for Promoting E-Businesses Using Website Optimization

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## ABSTRACT

The growth of computer-related technologies and the development of Internet in the world caused moving traditional businesses towards electronic, in addition to it, website-based startup businesses have been established. These businesses are faced with much larger target market than before, but reaching to a larger target market requires to cross from filter of search engines and to stay in the heart of customers and Internet users by their performance. This paper presents a model for promoting e-businesses using website optimization by studying previous studies in relation with electronic customer relationship management and website optimization techniques for search engines. The model consists of three main criteria of optimization of website features, on-page optimization and off-page optimization; each criterion contains sub-criteria that includes a total of 21 sub-criteria, after examining the criteria and sub-criteria using the hierarchical analysis process, a questionnaire was prepared to rank the criteria and sub-criteria and it was provided online to the web developers using the Press Line website. A large number of experts of Web design and development were invited by sending an invitation to social networks to participate. Ultimately the model was approved by analyzing the results and off-page optimization criteria had the highest importance and on-page optimization criteria had the least importance.

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## 1. Introduction

The emergence of computer and the development of Internet have transformed human life, one of the aspects of human life that has been influenced a lot in the modern era is the way of trading and business. With the presence of these technologies, the concept of e-business has formed and has quickly found its position as a science and a competition for companies and stores. Meanwhile, the role of web search engines for introducing web-based businesses is much highlighted. These are the search engines that reach the customer or user to a business through searched words and terms. On the other hand, the developers of these search engines develop web page ranking algorithms in a way that satisfies the human factor so they try the final results to have the most relation with the searched terms and show the websites that are most considered by users at a higher position.

When user's satisfaction is proposed in a store, investigating customer relationship management systems is undisputable; definitely, these systems using effective relationship with customers will attract their most satisfaction. The development of a web-based e-business will be possible by combining website optimization factors for search engines and factors of attracting customer satisfaction. Both customer satisfaction and search engine trust are important, but which one is the most important in promoting a business and increasing sales will be determined by experts in the field.

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## 2. Research Background

Yalcin and Kose in 2010, in a paper titled what is SEO, stated the concept of search engine optimization that data or information related to an unknown topic is usually searched on the first page of search engines. After the first test of five pages of result, the remaining pages are not evaluated by users. For this reason, for better introducing a web page, it is important that the page to be moved to the top lists of search engines. To achieve this purpose, website developers should use search engine optimization, since moving a web page to the first page of a search engine is only possible with a few necessary optimization rules. To better introduce company, services or products, it is important to have an efficient, well-structured and good-looking web page; but it is also important for customers to be able to easily search and find the relevant web page in a search engine. In addition, 80% of Internet users are

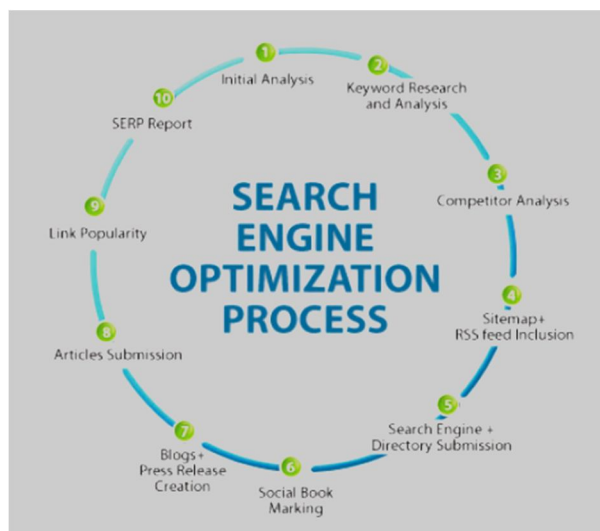
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mainly looking for products or services using search engines. Introducing and selling a company using a web page is an easy and efficient way. To achieve this purpose, company-related information is obtained using search engines. In a competitive business environment, top listings can be obtained using search engine optimization (Yalcin & Kose 2010, 493-487).

Aaron in 2016 in an article titled "Website Optimization Training for Search Engines" stated the concept of SEO: Search engine optimization means enabling a website to place in the top listings of a search engine for a few special keywords. There are many different factors that enable a website to move to top results. The most effective way to attract many users is to pay attention to search engine optimization. Because search engine optimization is primarily based on keywords that are proper for website and can be used for search engines. To optimize a website according to search engines, it must be suitable for some technical conditions. A common process for search engine optimization that can be done to raise a website is shown in Figure 1 (Aaron 2016).



**Figure 1. Search Engine Optimization Process (Aaron 2016)**

Gokhan and Kaskan conducted a study in 2014 titled the role of SEO in retaining users on the site and in this study; they examined the importance of SEO in addition to some of the influencing factors in SEO. These influencing factors are precisely the search engine optimization factors that their role is appeared from another angle. These factors include: how to maintain users on the site, which are determined by examining the time of staying user at a website, the instant leaving of websites. The study considers Google's search engine and its algorithms as the search engine to optimize content. The researcher concludes from findings that by updating Google Panda and Penguin, new paths have been explored in the world of search engine and SEO (Gokhan & Kaskan 2014, 342-335).

Yang et al. in 2015 conducted a study titled, investigating the relationship between search engine marketing, financing, and e-commerce performance, using empirical research conducted in B2C e-commerce companies. The results show that the business model and search engine marketing have a strong and positive relationship with company's performance, while the ability to finance has a negative impact on company's performance. This issue confirms the low input retunes in e-commerce and indicates that managers should focus on issues such as business model innovation and customer relationship management (Young et al. 2015, 1112-1106). Killoran in 2013 in an article titled, the use of the search engine optimization techniques to increase Website view, explored the factors that influence search engine ranking and works that web content creators can do to make finding of search engine content easier for them. In this research, ranking of search engines are formed by three classes: Search engine companies and programmers, 2- Experts of search engine optimization, and 3- Users of search engine.

Also, professional communicators can make it easier to find web content for the audience through search engines by applying three key lessons. For this purpose 1- When analyzing keywords, consider the websites of competitors and audiences, 2- Enter keywords into their web text to be appeared in the pages of search engine results 3-Relate their web content with other web content creators. Since successful search engine optimization takes a long time, professional communicators should gradually apply the lessons provided in this tutorial and keep themselves up to date with the constantly changing ranking algorithms and to be participated in changing the experts of search engine optimization (Killoran 2013, 50-66). Osman et al. (2012) examined the impact of ECRM on increasing sales in a study entitled "the impact of e-customer relationship management on internet shopping." Customer relationship management can be understood as a thought process in companies that interact with their customers, whereby they produce, collect, and analyze customer information and apply the results in marketing and service activities. The purpose of this study was to evaluate the impact of customer relationship management as a motivating factor on online shopping in an e-business environment. Customer relationship management helps to the success of online shopping in e-commerce by providing specific strategies that maintain a good image of the products. In addition, customer relationship management provides strategies for online shopping that maintain the relationship between the company and the customer (Osman et al. 2012, 365-364).

Akbarian et al. (2015) conducted a research titled "effective strategies in web page optimization using SEO technology. In this applied-heuristic research with survey method, it has tried to introduce strategies for increasing the number of website visits and placing them on the first page of search results. In

order to achieve this goal, it has encouraged users to use Google tools and stated website optimization techniques for search engines in detail using specific solutions, while introducing a variety of SEO and new search engine algorithms. Using the results of this study to provide useful information in the field of website optimization can be useful for researchers and managers who are familiar with programming and are interested in having a website with proper visitor (Akbarian et al. 2016).

In this section, the research literature on e-customer relationship management on the one hand and factors affecting website and SEO optimization on the other hand was reviewed. Many studies and articles have been studied and reviewed. In Table 1, the criteria obtained from recent research for promoting e-business have been investigated. In this table, the criteria that had the most relation with the research were included and the criteria that led to the optimization of the website for search engine and users were extracted. After this section, the research model will be expressed according to the criteria in Table 1.

**Table 1. Summary of website optimization Criteria obtained from previous research**

References of indicators							Indicators of website optimization
7	6	5	4	3	2	1	
Yalcin	Aaron	Akbarian	Yang	Osman	Gokhan	Killoran	row
*	×	×	*	×	*	*	Optimization in designing
×	×	*	×	×	×	*	Optimization in coding
×	×	*	*	×	*	×	Tagging and information architecture
×	×	×	×	×	×	*	URL and maintaining it
*	*	*	*	×	×	*	Selecting keywords
×	*	×	*	*	*	*	High-quality content
*	*	×	*	×	*	×	Using multimedia
×	*	×	*	×	×	*	Maintaining keywords' density
*	*	*	*	×	*	*	Speed and security
×	×	×	×	*	×	*	Registration in validation systems
×	*	×	*	*	*	×	Interaction with users
×	*	×	×	*	×	×	Customer service
*	*	*	*	×	*	*	Search capabilities
×	×	×	×	*	×	×	Loyalty programs
×	*	×	×	*	×	×	Payment Methods
*	*	×	*	*	×	*	Attraction of more traffic
×	*	*	×	×	*	*	Linking
×	*	×	*	×	*	*	socialization
×	*	*	×	×	×	*	Depth of indexing
Note: Mark × means non-existence, and * means existence							

### 2.1. Proposed model

In this model, internet business optimization is categorized in three layers of on-page optimization, off-page optimization and optimization of website features. In general order of expressing layers in this paper, the first layer that is considered is on-page optimization, but the preference of this layer and subsequent layers will only be determined after model evaluation and in the next chapter. The schematic diagram of the proposed model is shown in Fig. 2, which briefly shows the model.

Beyond the leading model, entering every path requires a goal, and that is the main step. The goal of this study is to promote web-based e-businesses, whose purpose is business, the business that is developed provides products and services that are introduced in words or phrases. These words and phrases are the business keywords; keywords play the most important role in everything. They are the same terms that retailers install in the shop to explain their work, so they must be specified before entering the business keywords model. Although in the model in the optimization layer on the page, how to select these words for internet businesses is explained, it is better to categorize the words and terms that are to be stated for the business before starting any business development.

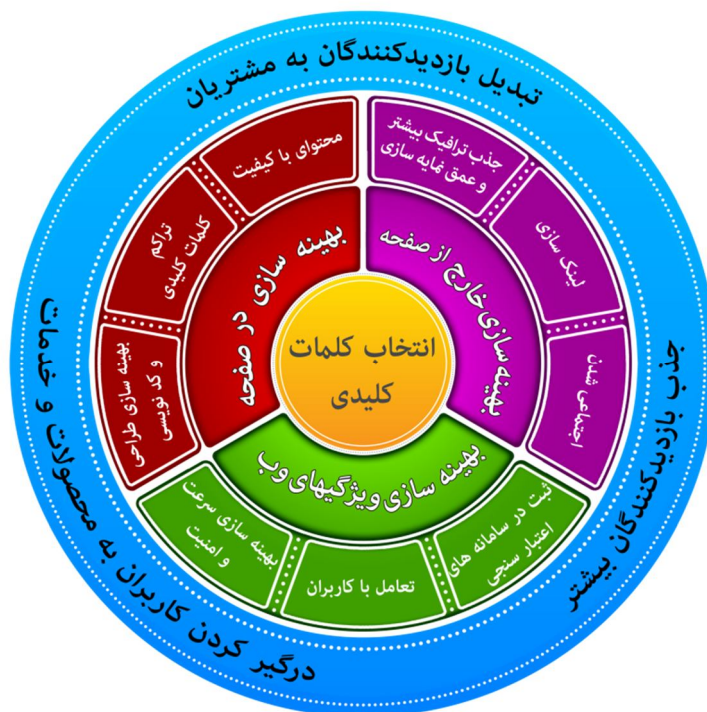


Figure 2. Conceptual structure of proposed model of e-business promotion using SEO (Made by researcher)

## 2.2. Figure translation

Optimization in designing
Optimization in coding
Tagging and information architecture
URL and maintaining it
Selecting keywords
High-quality content
Using multimedia
Maintaining keywords' density
Speed and security
Registration in validation systems
Interaction with users
Customer service
Search capabilities
Loyalty programs
Payment Methods
Attraction of more traffic
Linking
socialization
Depth of indexing
Optimization of website features
Off-page Optimization
On-page Optimization

## 3. First layer: page optimization



Figure 3. First layer of the proposed model (made by the researcher)

### 3.1. Optimization in designing

This criterion has been extracted from Table 1 of previous research and from the first, second, fourth and seventh rows. There are two major factors in User interface (UI) and User Experience (UX) design that must be considered in each design. The UX user experience is called to the user's habits and emotional contact toward using a particular product or system. The UI in the design industry is a space where human-machine interactions are created. The purpose of this interaction is to allow for the effective operation and control of the machine by humans, while the machine returns information that helps users to make decisions.

### 3.2. Optimization of coding

This criterion has been extracted from Table 1 of previous research and from the first and fifth rows. Optimizing Website codes based on W3C World Wide Web Consortium standards will have a direct impact on position of a website in search engine ranking. If the W3C standard is not considered, the search engines may not properly review the site and may have problems for reviewing the site content. Considering W3C standards, especially in HTML and CSS, greatly enhances site rank in search engines.

### 3.3. URL and its maintenance

This criterion has been extracted from Table 1 of previous research and from the first row. One of the issues that have been considered by search engines for many years is the address of pages or URL. Search engines after indexing web pages in case of changing in the URLs lose them, and the website rank will decline to be able to index new URLs again. Another issue is to choose a URL and period of its registering, definitely the impact a domain or four-letter address will be more on users, and the impact of linking the URL and address suffix to the web business on the search engine will be more than the unrelated domain.

### 3.4. Tagging and information architecture

This criterion has been extracted from Table 1 of previous research and from the second, fourth and fifth rows. In fact, Metatags are summaries of information created in sheet or notes that have a particular popularity to search engines. These descriptions are not visible to website users and they are only visible to the search engine. The most popular sections of metatags in SEO are keywords and Meta of descriptions, and in the past, metatags were important, but not as important as today. Nowadays search engines pay particular attention to this section and the more precision for their choosing causes better results.

### 3.5. Selecting keywords

This criterion has been extracted from Table 1 of previous research and from the first, fourth, fifth, sixth and seventh rows. As it was mentioned, the role of selecting keywords as the target of the business is before other layers, but it is included in this layer because keywords are related to on-page content. In an internet business, the goal is to sell certain services or products. In addition, the goal is branding a business in a particular context that the whole search engine optimization should be appropriate to the same business-related words or terms; but when business enters content generation and optimization on page, it should pay particular attention to selecting each keyword for each product and content. Selecting keywords at this stage is not just the whole business and branding. At this step, the role of keywords should be considered for the smallest content on the page.

### 3.6. High-quality content

This criterion has been extracted from Table 1 of previous research and from the first, second, third, fourth and sixth rows. Good content is the content that paying attention to the human audience is the highest priority in it. This means that it must produce a content that attracts users and worth reading. In fact, in order to produce professional content, it must have something to say among competitors. The three main features of good content from the point of view of those who work in the field of producing content are: providing useful information in a specific format to a human audience, increasing site

rankings in search engines, attracting useful links from other websites (Perez & Kodina 2017). To create optimal content, it must make a list of the types of activities needed, including sections such as expert interviews, goal-related resources, and investments to help achieve the goal.

### 3.7. Using multimedia content

This criterion has been extracted from Table 1 of previous studies and from the second, fourth, sixth and seventh rows. One of the factors that will most effectively influence SEO is multimedia content that includes images, videos and audio. The impact that multimedia content has on a website's ranking in the search engine begins with the role of attracting the audience, the human user will enjoy seeing high-quality images and pleasant and expected sounds, and on the other hand, the images, sounds and videos will occupy the user and will increase the time of user presence on the site.

### 3.8. Maintaining keywords' density

This criterion has been extracted from Table 1 of previous research and from the first, fourth and sixth rows. After selecting the keywords for each article or content, the keywords' density should be considered. To what extent and how many should be used in content, the keywords should be placed in four content sections: the content title, inside the content, in one of the content titles and in the address. The title should be chosen to include the keyword and have a particular attractiveness to the user. The impact of keywords on SEO is clear in the content section. According to the number of keywords that are considered for the content, they should be repeated relative to the keywords within it. For example, in WordPress, content is specified by the number of words. Every 300 words of content should contain four to five keywords (Killoran).

## 4. Second layer: Optimizing Website features



Figure 4. Second layer of the proposed model (made by the researcher)

### 4.1. Optimizing Web Speed and Security

This criterion has been extracted from Table 1 of previous research and from the first, second, fourth, fifth, sixth and seventh rows. The speed of a website has a great impact on its success because speed is one of the important factors of search engines and it should be investigated. On the other hand, when users face with a slow loading of a website, they will leave the site and are reluctant to review it. On the other hand, it may be the main concern of all users of a security network, especially if financial transactions are going to be performed. On the other hand, one of the factors that attract users to a website or web service is its security and constant availability.

### 4.2. Registering Internet business in validation systems

This criterion has been extracted from Table 1 of previous research and from the first and third rows. From the view of a smart user to an online business, despite the long presence on that website, the ultimate trust will be created to find a strong support. This support is created in accordance with the security laws of each country for online businesses in that country. Of course, many users accept search engine results as support, but the fact is that virtual business is now true when the real or legal entity has formally accepted its responsibility. This acceptance will be implemented in organization and governmental trusting systems and will be granted to businesses after accepting certificates to be viewed by site users. While this action, an excellent link will be occurred between a governmental website with good rank and an internet business.

### 4.3. Interaction with user

This criterion has been extracted from Table 1 of previous studies and from the second, third, fourth and sixth rows. One of the most important parts that can engage the mind of a web creator as a web engineer is the view of users and readers of website content. For this issue to be satisfying, it should look for ways to make users feel pleasant and know that there is always a space for them to comment. Of course, paying attention to the culture of users in

interacting with them has a great importance. Receiving rating from users to products or articles is one of the ways to respect the user and to inform other users about another users' view.

#### 4.4. Customer Services

This criterion has been extracted from Table 1 of previous studies and from third and sixth rows. One of the reasons for the success of large online stores is to provide good service to their customers. For an online business, services should be provided to customers that must be delivered to the customer before selling, during and after the sale, to be familiarized with products and services, to test and compare them, special discounts and conditions to be provided for them, and to be relaxed after purchase in terms of support and after-sales services. On the other hand, services should also be provided to those who are not customer at the moment but in the near future, to be customer. In fact, it can be said that without sales services should also be provided to users, which can include shopping guides, related articles and videos and other content. These services improve the SEO rank of the website by increasing the visit and time staying on the website while enhancing customer and user satisfaction.

#### 4.5. Search capabilities

This criterion has been extracted from Table 1 of previous research and from the first, second, fourth, fifth, sixth and seventh rows. Users of a website should be able to search or filter the content in relation to the keywords that they have been entered website through it. Definitely, if it is not possible to easily search the site content or filter the product features, the user logs out and searches for the results of their filters and searches on the search engine and this is a big risk of losing a customer in the highly competitive internet market.

#### 4.6. Loyalty programs of customers

This criterion has been extracted from Table 1 of previous studies and from the third row. In today's highly competitive business environment, an entrepreneur or company faces many challenges and is constantly working to sell its products and services. The ultimate goal in a business or online store is to sell products and services, while keeping the customer is less expensive than finding a new customer and the possibility of purchasing current customers is more than new customers. For this reason, business owners pay attention to loyalty programs to keep their current customers by doing some work and creating some incentives. An incentive program can include offering discount codes on different occasions for users, of course, most loyalty programs will start with receiving email and customers' contact information when registering a customer and their first purchase.

#### 4.7. Payment methods

This criterion has been extracted from Table 1 of previous research and from third and sixth rows. For a seller and buyer in a sales process, the most important step is to pay the customer. This step is important for the seller because he receives a fee for his services and goods that will sustain his business and it is important for the buyer because he put his bank account and capital information in the high risk world of internet in order to obtain a product. Therefore, paying attention to payment methods and payment gateways has a great important. With the increasing growth of online stores, payment methods have extended a lot, including on-site payment, payment with digital currency, bank payment gateways, payment with online wallets.

### 5. Third layer: off-page optimization

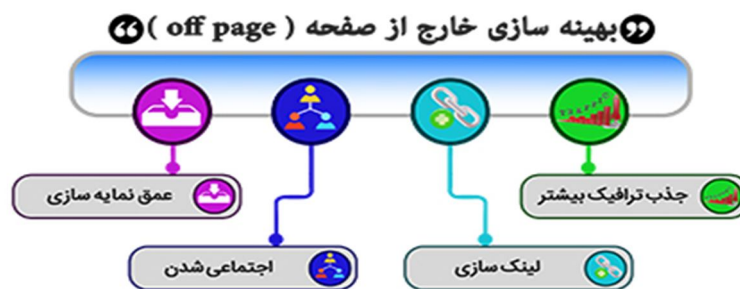


Figure 5. The third layer of the proposed model (made by the researcher)

#### 5.1. Attraction more traffic

This criterion has been extracted from Table 1 of previous research and from the first, fourth, sixth and seventh rows. One way to increase site traffic is to consider SEO principles that do not need to pay a lot of money, but when there is a lot of competition for a keyword, SEO alone is not enough for business promotion. So the solution is to introduce SEM and Internet advertising methods, search engine marketing (SEM) affects very fast unlike SEO, and the results can be seen, but it is very costly. The main section of SEM becomes the top search engine ads called Google Adwords. A lot of Google's revenue has been allocated to the word-selling business. In SEM, the ads are in the form of Pay Per Click (PPC) and Cost Per Click (CPC), it means that users have to pay for every click on the link. Using Google Analytics tool, it can see the results of these internet ads in detail.

### 5.2. Linking

This criterion has been extracted from Table 1 of previous studies and from the first, second, fifth and sixth rows. The large number of standard communication links with other websites is a sign of the website's popularity and importance. However, according to search engine algorithms, high communication s of website is not related to its quantity but rather to the quality of the links. If unrelated links to the content are seen on the website, it will definitely decrease the website rating. So the higher the link relation with the content and the keyword, the higher the quality and the more impact the link has on SEO.

### 5.3. Socialization

This criterion has been extracted from Table 1 of previous research and from the first, second, fourth and sixth rows. After the content is produced, it is time to introduce it, certainly as the content is placed on the site; it is not a good reason to be seen and increasing visit. One way to see your content is to get help from sites of social networks. If site owners are not members in social networks, they should do so and become member in them especially highly visited and most popular like Facebook, Twitter, LinkedIn and Instagram and create their own page. Then share whatever they publish on their website.

### 5.4. Depth of indexing

This criterion has been extracted from Table 1 of previous research and from the first, fifth and sixth rows. Indexing is referred to a step that search engines identify web pages through robots. In general, all search engines perform indexing by communicating between crawling robots, their databases and their data recovery software. The steps of this indexing include: Identifying and reading information of pages or websites about robots; Transferring and inserting information collected in a search engine database; Searching for information in a database through data retrieval software; retrieval, rating and display of information based on the information in the database. The criteria for indexing sites by search engines are: having valuable data with many pages; having high visitors; being up to date and adding content.

## 6. Model evaluation

At this stage, the opinions of a group of experts on the factors influencing the promotion of e-businesses using website optimization techniques for the search engines examined in the model have been collected using questionnaire tool. The main tool at this stage is a questionnaire designed using the AHP model which is designed based on the factors in the model and is available online at (<https://survey.porsline.ir/s/BMvb4B>). In the following, the results of participating 15 experts in the questionnaire will be investigated. The main tool for evaluating will be Expert Choice software. The reason for choosing this tool has been simplicity in working with it and its excellent record in solving hierarchical analysis problems. In the following, first the symbol applied in the criteria extracted from the theoretical foundations which are the criteria of research are specified in Expert Choice software, then their hierarchical tree is drawn with their symbol. In the next steps, the relative weight of the criteria and their inconsistency rate will be calculated to be obtained the weight of each of the criteria and sub-criteria.

**Table 2. Variables extracted from theoretical foundations**

Sym bol	Sub-criteria	Sym bol	Criteria	Number
C31	key words	C3	On-page optimization	3
C32	Continuous production of high-quality content			
C33	Using multimedia content			
C34	Optimization in designing			
C35	Tagging and information architecture			
C36	URL and its maintenance			
C37	Optimization in coding			
C38	Maintaining keywords' density			
C21	Registration in validation systems	C2	Optimization of website features	2
C22	Search capabilities			
C23	Loyalty programs			
C24	Speed and security optimization			
C25	Payment Methods			
C26	Interaction with users			
C27	Customer service			
C11	Linking	C1	Off-page optimization	1
C12	Depth of indexing			
C13	socialization			

C14	Attraction of more traffic		
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## 7. Forming the hierarchical structure of the research problem

The first step of the hierarchical analysis process is to form a hierarchical structure or hierarchical tree. In order to form a hierarchical structure of the problem, the components of the problem, including research criteria and sub-criteria, must be identified. Factors affecting the promotion of e-business were identified, screened and categorized in the proposed model. At this stage, it can form the hierarchical structure of the problem. Figure 6 shows the hierarchical structure of the research plotted by Expert Choice software.

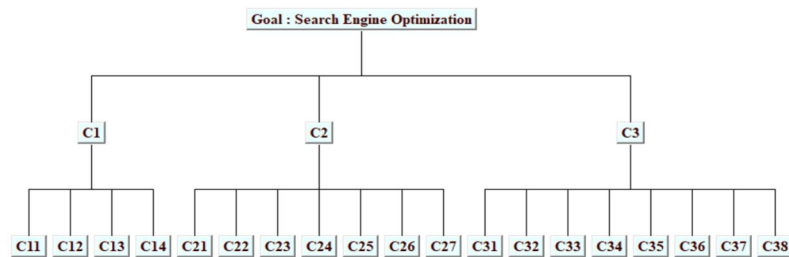


Figure 6. Hierarchical structure of research

Calculating the relative weight of the main criteria of research:

After identifying the hierarchical structure of the research, the weight of the main criteria of the research relative to target should be calculated and evaluated. To calculate the weight of the main criteria relative to target, a paired comparison questionnaire of the research criteria relative to their target was provided to the research experts to complete. After completing, the paired comparison questionnaire will be entered into Expert Choice software to the weight of the main criteria relative to target to be evaluated and calculated. In case of inconsistency of the paired comparison questionnaire of the main criteria for each expert are acceptable (less than 0.1), the results of calculations will be presented. Otherwise, the paired comparison questionnaires should be returned to the experts for review. Figure 7 shows the pairwise comparison matrix from respondents who entered Expert Choice software. Table 3 shows the weight of the main criteria relative to the target with its inconsistency rate. Figure 8 shows the order of importance of the main criteria relative to the target. As it can be seen among the three main criteria, C1 criterion, OffPage optimization with a weight of 0.469 has been identified as the most important research criterion and C2 and C3 criteria have gained next ranks.

	C1	C2	C3
C1		1.48692	2.29567
C2			2.01577
C3	Incon: 0.01		

Figure 7. Paired comparison matrix of the main criteria relative to the target

Table 3. Relative weight of the main criteria and its inconsistency rate

row	main criteria	Relative weight
1	C1	0.649
2	C2	0.345
3	C3	0.187
Inconsistency=0.00753		

Priorities with respect to:  
Goal : Search Engine Optimization

Combined



**Figure 8. Order of each of the main criteria according to their weight**

Calculating relative weight of research sub-criteria: In this section, it is attempted to calculate the relative weight of sub-criteria for each of the main criteria using a paired comparison questionnaire. For this purpose, a paired comparison questionnaire was developed for the sub-criteria of each of the main criteria and then provided to the experts. Then the collected data were entered into Expert Choice software to obtain the relative weight of each sub-criterion relative to its main criterion as well as their incompatibility rate. If the inconsistency rate of paired comparison questionnaires of sub-criteria is acceptable, the results will be provided. The calculations related to the sub-criteria of each of the main criteria are presented below.

Calculating the relative weight of OffPage optimization sub-criteria:

Figure 9 shows the pairwise comparison matrix of OffPage optimization sub-criteria. Table 4 shows the relative weight of OffPage optimization sub-criteria along with its inconsistency rate. Figure 10 also shows the order of importance of each of the OffPage optimization sub-criteria based on their relative weight. As it can be seen, among the OffPage optimization sub-criteria, the C14 sub-criterion i.e, traffic attraction with weight 0.379 has allocated the first rank. Sub-criteria C12, C11, C13 have allocated the next ranks.

	C11	C12	C13	C14
C11		1.90306	2.21094	1.98451
C12			2.22837	1.61253
C13				2.30557
C14	Incon: 0.03			

**Figure 9. Pairwise comparison matrix of OffPage optimization sub-criteria****Table 4. Relative weight of OffPage optimization sub-criteria and inconsistency rate**

Row	OffPage optimization sub-criteria	Relative weight
1	C11	0.203
2	C12	0.293
3	C13	0.126
4	C14	0.379
Inconsistency=0.03		

**Figure 10. The order of importance of each OffPage optimization sub-criterion**

Calculating the relative weight of the optimization sub-criteria of website features:

Figure 11 shows the pairwise comparison matrix of optimization sub-criteria of website features. Table 5 shows the relative weight of optimization sub-criteria of website features along with its inconsistency rate. Figure 12 also shows the order of importance of each of optimization sub-criteria of website features based on their relative weight. As it can be seen among the optimization sub-criteria of website features, the C26 sub-criterion i.e, interaction with users with weight 0.304 has allocated the first rank.

	C21	C22	C23	C24	C25	C26	C27
C21		2.36874	2.071	1.6309	2.08732	2.93814	1.49865
C22			3.3924	1.93991	4.22258	1.88817	2.27152
C23				2.14274	1.75483	3.83006	2.15963
C24					3.05556	2.30557	1.66248
C25						5.33745	2.93016
C26							2.63703
C27	Incon: 0.01						

**Figure 11. Pairwise comparison matrix of optimization sub-criteria of website features**

**Table 5. Relative weight of optimization sub-criteria of website features and inconsistency rate**

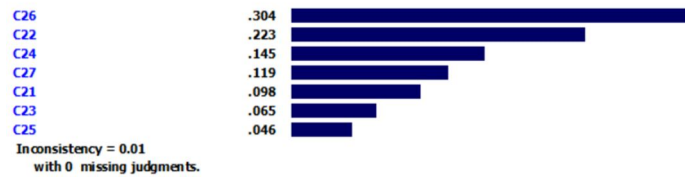
row	optimization sub-criteria of website features	Relative weight
1	C21	0.098
2	C22	0.223
3	C23	0.065
4	C24	0.145

**The rest of Table 5. Relative weight of optimization sub-criteria of website features and inconsistency rate**

row	optimization sub-criteria of website features	Relative weight
5	C25	0.046
6	C26	0.304
7	C27	0.119
Inconsistency=0.01		

Priorities with respect to:  
Goal : Search Engine Optimization  
>C2

Combined

**Figure 11. The order of importance of each of the optimization sub-criteria of website features**

Calculating the relative weight of OnPage optimization sub-criteria:

Figure 12 shows the pairwise comparison matrix of OnPage optimization sub-criteria. Table 6 shows the relative weight of OnPage optimization sub-criteria along with its inconsistency rate. Figure 13 also shows the order of importance of each of the OnPage optimization sub-criteria based on their relative weight. As it can be seen from the OnPage optimization sub-criteria, the C34 sub-criterion i.e, optimization in designing with weight 0.267 has allocated the first rank. Optimization sub-criteria in coding and keywords have allocated second and third ranks among the OnPage optimization sub-criteria.

	C31	C32	C33	C34	C35	C36	C37	C38
C31		2.35216	4.31244	1.45868	2.85201	3.58466	1.52767	1.76866
C32			3.11123	2.83742	2.14452	2.95325	2.16894	1.92474
C33				5.51769	1.81712	1.80291	4.42464	3.6571
C34					4.07439	4.6578	1.97747	2.70192
C35						1.80291	2.65782	1.88817
C36							3.61864	2.87449
C37								2.20327
C38	Incon: 0.02							

**Figure 12. Pairwise comparison matrix of OnPage optimization sub-criteria****Table 6. Relative weight of OnPage optimization sub-criteria and inconsistency rate**

Row	OffPage optimization sub-criteria	Relative weight
1	C31	0.175
2	C32	0.099
3	C33	0.036

4	C34	0.267
5	C35	0.064
6	C36	0.047
7	C37	0.192
8	C38	0.12
Inconsistency=0.02		

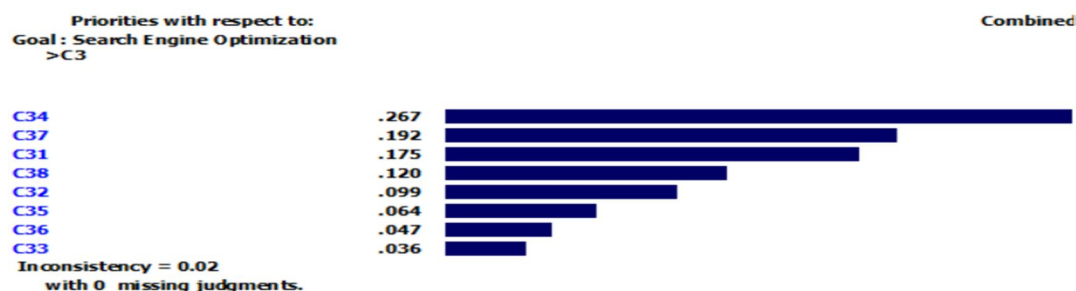


Figure 13. The order of importance of each of the OnPage optimization sub-criteria

## 8. Calculating the final weight of the research sub-criteria

After calculating the relative weight of the main research criteria relative to the target and the relative weight of the sub-criteria relative to the main criteria, now, it can calculate the final weight of the research sub-criteria. To obtain the final weight of the research sub-criteria, the relative weight of the main criteria must be multiplied by the relative weight of their sub-criteria. In this study, the final weight of the sub-criteria was obtained by using the software Expert Choice. According to Fig. 14, among the research sub-criteria, C14, C12 and C26 have gained the first to third ranks respectively. The weight and order of importance of the other criteria can be seen in Figure 14.

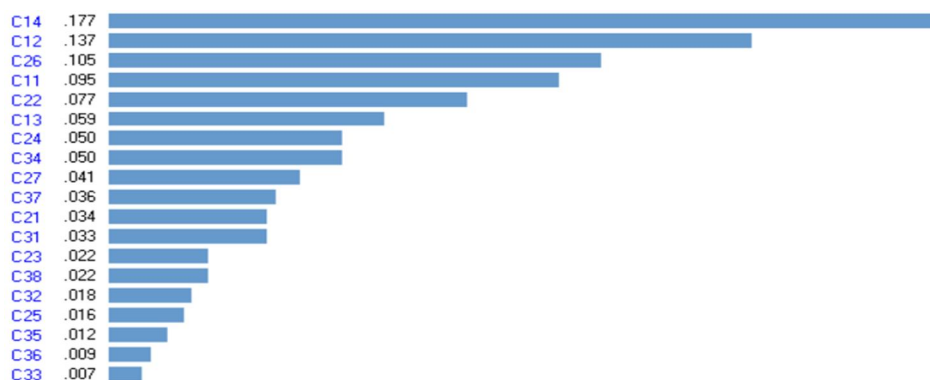


Figure 14. The order of importance of the research sub-criteria based on the final weight

## 9. Conclusion

In this paper, it is attempted to identify the factors that are more important in promoting an internet business and used in practice after studying and researching the e-customer relationship management system and SEO, and considering the view of active experts in website design and development. The purpose of the present study is to present a suitable model for the promotion of electronic businesses using SEO techniques. For this purpose, according to the new search engine algorithms, paying attention to users' satisfaction and considering technical principles can greatly affect a website's ranking and increasing its visit and sales.

According to the materials mentioned of this study, various cases can be suggested for further study by researchers. As it was stated, achieving customer satisfaction and effective communicating with customers in different ways will attract users to websites and search engine algorithms will effectively follow the goal of user's satisfaction and attraction of more users and further sales and promoting it will follow business. The following are some of the things that can be considered as future research. Researches on promoting e-business are listed below.

- 1- Promoting e-businesses using social media SEO.
- 2- Examining the role of effective email marketing in increasing sales and improving SEO ranking.
- 3- Investigate the impact of content management systems of WordPress and Joomla on website position in search engine results.
- 4- Determining the effective parameters in reducing the time to reach the desirable position of search engines.