



DISCOVERING WHAT MAKES A SME WEBSITE GOOD FOR INTERNATIONAL TRADE

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Received 10 October 2015; accepted 26 November 2016

Abstract. The effectiveness of websites has an impact on the representation of a SME and can have an effect on foreign trade. Thus, developing a reliable and robust model to assess the effectiveness of SME websites is important for researchers and practitioners. The aim of the study is to propose a SME website efficiency evaluation methodology from an international trade perspective. Determining the effectiveness of websites is a multi-dimensional decision-making problem which encompasses the assessment of information quality, system quality, and service quality. The criteria and sub-criteria affecting website effectiveness were determined through literature research and expert panel assistance. AHP method was utilized to determine the relative weights of the evaluation criteria in the study. Then, fuzzy linguistic variables were adopted to rank the websites of SMEs engaged in foreign trade. The proposed evaluation model identifies key factors regarding the criteria and sub-criteria of a website effectiveness. The model can provide a helpful reference in designing useful websites which are an important task for SMEs involved in international trade.

Keywords: SME websites, international trade, website evaluation, multi-criteria decision-making, analysis, fuzzy linguistic scale, AHP.

JEL Classification: C63, F10, L21, M21.

Introduction

Competing in an international environment, promoting the goods and services of a company, reaching more clients globally to make more revenues and building a more sustainable concern require a significant amount of funds and experience. Many of the SMEs experience difficulties in attaining benefits of foreign trade as they lack necessary resources such as capital and skills. Presentation of a company and the goods or services offered is crucial for access to foreign markets. Improved access to international markets and promotion of products in foreign markets encourage the firms to export and increase the success in new markets (Lileeva, Trefler 2010; Akman 2016). Katsikeas *et al.* (1997) show that export market

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accessibility is a more significant factor in export success among SMEs compared to larger firms. Entrance to new markets is facilitated only by communication between the trading parties which incurs additional costs. Fink *et al.* (2005) attested that communication costs have a significant impact on international trade and the decrease in communication costs are one of the causes of World trade growth. The internet offers fast, borderless and cheaper opportunities for representing products and services. This advantage lowers barriers to access international markets for SMEs. Contractor *et al.* (2005) further argued that the usage of internet by corporations alleviates inadequacies in international business experience. The internet is considered as a common marketing ground for trading companies. It can serve as a medium to overcome disadvantages of SMEs in promoting their products in foreign markets. International networking is one of the determining factors of export success. The websites, official representatives of corporations, are likely to have a central function in international networking of a company (Glavas, Mathews 2014). Nearly 50% of the SMEs consider official websites as a facilitator of network building (Madill, Neilson 2010). However, the effectiveness of websites and the success of their presentation of the products or offers are key elements in achieving this function.

The invention of the internet has changed many aspects of life by lowering limitations to access of information and the ease of communication on the World Wide Web. The effects of this change have been obvious in business and international trade. The rapid spread of internet lowered the barriers to international trade and significantly expanded the export volume of the World (Freund, Weinhold 2004). Export information availability, international network building, and marketing through websites facilitate exports and gradually increase the export market shares of a corporation (Bianchi, Mathews 2016). Utilizing websites to provide better communication functions increase exporters' performance in foreign markets (Wang *et al.* 2011). Usage of internet and websites as a marketing tool contributes to the internationalization and export success of SMEs in both production and service industries (Mathews *et al.* 2012; Moini, Tesar 2005; Choi 2010). On the other hand, the existing customers also demand an effective website. The influence of the current customers' pressure on the adoption and effectiveness of a website is higher than other factors such as competitor pressure or the motivation of reaching new customers (Beckinsale *et al.* 2006). Goedhuys and Sleuwaegen (2009) indicate that the SMEs actively interacting with their clients through their websites achieve higher market share and growth rates than their counterparts. Therefore, designing an effective website is not only a catalyst for engaging in foreign markets and increasing their sales but also an important concern for sustaining SMEs in today's business atmosphere. The empirical studies show that the SMEs are deriving benefits from the use of websites. This trend enabled the SMEs in both emerging and developed countries initiate trade beyond their local borders in the past decade.

The Internet as a virtual platform is an advantage for SMEs with no or lower international networks and helps them in engaging in foreign trade. However, ineffective websites are likely to turn this advantage into a disadvantage. Website effectiveness is one of the important aspects of international networking and thus, international trade for SMEs. Website effectiveness in different fields has been studied extensively in the literature. However, the problem of website effectiveness of SMEs in the realms of foreign trade is an issue that hasn't been

addressed adequately. We were motivated by the lack of studies focusing on the evaluation of website effectiveness of SMEs from the perspective of the users in international trade. The focus of our research is a distinguishing feature and thus, the study makes a significant contribution to the body of literature. The proposed model utilizes multi-criteria decision-making models (MCDM) for evaluating and ranking the effectiveness of SME websites. The results of the research can help SMEs engaged in foreign trade to assess their website effectiveness and develop policies for website enhancement. The findings of the study have a potential to form a basis for further studies on the relation of website efficiency and export performance of SMEs.

AHP is one of the most useful and popular methodologies in multi-criteria decision-making problems (Mardani *et al.* 2015). An MCDM; Analytic Hierarchy Process (AHP) is utilized to evaluate SME websites in this study. The nature of the website evaluation criteria is qualitative with sometimes conflicting assessments of experts. AHP enables to combine a group consensus by weighing the criteria and sub-criteria to select the best suitable criteria (Akincilar, Dagdeviren 2014). The number of respondents, all foreign trade experts, to our questionnaire is forty-nine. Therefore, we consider AHP is an ideal method for the study.

The studies of Ho (2008), Zavadskas and Turskis (2011), Akkaya *et al.* (2015), Tyagi (2016) and Veisi *et al.* (2016) show that AHP is an MCDM tool that has been used in many areas ranging from economics, education, commerce, manufacturing and politics to finance, engineering, military, environment and agriculture. Akincilar and Dagdeviren (2014), Lee and Kozar (2006), Lin (2010), Chen *et al.* (2012) and Yu *et al.* (2011) are some website evaluation studies employing AHP method.

This paper is divided into five sections. After describing the problem in this section, a literature review on website evaluation followed. The second section is dedicated to introducing AHP methodology. The empirical analysis, results, and discussion are presented in the third section. Conclusions and future research take part in the last Section.

1. Literature review

Participants of international trade generally start with a preliminary research usually carried on the internet in this day. Thus, official websites are not only an information source for current customers but also another path for gaining new customers. Websites are open exhibitions with no access limitations of time, location, and borders. Effective websites are likely to produce more successful results in exploiting the opportunities of the internet. Samiee (1998), one of the earlier studies on the role of websites on the export performance, puts forth that having a corporate website does not present a comparative advantage in export markets over competitors. Actually, making better use of the opportunities websites offer and increasing website effectiveness through skills and experience does provide higher competitive power in export markets. Assessing the enterprise's own website and the websites of competitors' websites are important in promoting the competitiveness level and achieving competitive advantage (Li 2015). The design and function of the website of an organization is an important factor in communicating with customers. Unfortunately, many corporations, particularly SMEs, fail to realize the importance of online presence and its impact on the

customers (Cheek *et al.* 2016). Sinkovics and Penz (2006) indicate that consumers as decision makers value the content and design of websites serving their essential objectives. Corporations need to develop methodologies, procedures, and practices to achieve this goal.

The business professionals and researchers are focused on website evaluation and success factors to support the overall improvement of websites. Some of the recent examples of the studies are given as follows: the evaluation of C2C e-commerce websites (Li 2015; Masudin, Sapturo 2016), the evaluation of group-buying websites (Chen *et al.* 2012), library websites (Xiaolan *et al.* 2013), hotel websites (Ting *et al.* 2013; Akincilar, Dagdeviren 2014), bank websites (Waite *et al.* 2011; Kaya, Kahraman 2011; Ecer 2014), trading websites (Meng, Wu 2014), SME websites (Sanders, Galloway 2013; Karmokar, Singh 2012; Sinkovics, Penz 2006; Stockdale *et al.* 2005; Houghton, Winklhofer 2004), corporate websites for export marketing (Dou, Tan 2002), B2C e-business websites (Kang *et al.* 2016; Lee, Kozar 2006; Yu *et al.* 2011), course websites (Lin 2010) and business school websites (Kincl, Štrach 2012).

Sinkovics and Penz (2006) conducted a research using Likert scale questionnaire to assess the factors impacting on SME website empowerment. They suggested five dimensions with the assistance of experts panel; general aspects, information, transaction, relationship and target audience. Their findings indicate interactivity and information are the most important aspects of website effectiveness. Stockdale *et al.* (2005) analyzed the effectiveness of SME business to business websites from a user perspective. They assessed the websites using eQual 4.0 evaluation instrument and concluded that SMEs need to improve information and service efficiency dimensions of their websites. Lee and Kozar (2006) researched the criteria affecting website effectiveness, and the relationship between business performance and website preference adopting AHP methodology. They stated system quality and navigability are considered the most important attributes and demonstrated that there is a significant relationship between financial performance and website preference. Sanders and Galloway (2013) evaluated the websites of rural small firms using Web Assessment Index (WAI). They concluded that the effectiveness of small firms' websites is generally lower than that of large firms. The quality of rural SMEs websites differs with the location of the company. SMEs need to increase website effectiveness given their remoteness and contribution on rural economies.

Dou and Tan (2002) investigated the impact of websites on export marketing and tested the proposed hypothesis utilizing ANOVA model. They suggested that trustworthiness, comprehensive product information, multiple languages, customization capability, and responsiveness are critical components of an exporter's website. It is concluded that the companies in different industries need to strengthen transaction or communication capabilities of the websites.

Cebi (2013) investigated criteria affecting website effectiveness and their alteration with the website type. MCDM methods like Delphi, DEMATEL and TOPSIS were employed for empirical analysis. Usability, visual aspects, technical adequacy, content, security, communication, and prestige were considered as main design parameters. It is concluded that significance of the criteria shows different patterns for different types of websites (commercial, information, entertainment, communication). Kincl and Štrach (2012), attempted to compare and contrast user satisfaction attributes to find out practical measurement tools for business school website evaluation. Their research model evaluated content, presentation (colour, ap-

peal, layout, navigation) and overall impression as success criteria, identifying a decision-tree analysis with the results of a Likert scale questionnaire. The results indicate that content and navigation are critical factors for website effectiveness.

Ecer (2014) proposed a hybrid evaluation model to assess the effectiveness of banking websites combining AHP and COPRAS-G methods. The study determined the weights of the criteria by AHP method and COPRAS-G method is used to rank the websites for their effectiveness. Ecer (2014) adopted three main criteria (information quality, service quality, and system quality) and ten sub-criteria. He concluded that most important criterion is information quality. Reliability, navigability and response time are significant sub-criteria. The study also ranked 17 banking websites utilizing COPRAS-G methodology.

Bulicek and Drdla (2015) evaluated quality of urban public transport websites utilizing AHP method. The research was intended to guide transport companies in fulfilling quality standards of information service provided by websites. Travel information, system information, additional system information and information for non-travel purposes have been described as criteria as well as 35 sub-criteria. The weights of 35 sub-criteria have been calculated by using AHP method. The quality of transport websites of 161 cities were ranked by estimated weights of individual information elements.

Kang *et al.* (2016) assessed e-commerce websites using fuzzy hierarchical TOPSIS based on E-S-QUAL. The researchers defined four criteria such as efficiency, fulfilment, system availability, and privacy and 22 sub-criteria for determining the service quality of websites. The hierarchical structure has been constructed using TOPSIS and the weights of the criteria have been decided by E-S-QUAL. The weights of the criteria show that fulfilment, efficiency, privacy and system availability are important for a B2C website respectively. The ranking of the preferences for the six selected B2C e-commerce websites has been carried out utilizing linguistic values and fuzzy numbers.

There are specific elements contributing to the quality and efficiency of a website. These criteria are considered as proxies of an efficient website in the relevant literature. We reviewed them with the help of the experts' panel and added some criteria to measure the contribution of websites to the export performance of a company. The criteria, sub-criteria, and several studies employed them are given in Table 1.

Table 1. The criteria and sub-criteria of website effectiveness

Criteria	Definition	Studies
Information Quality (IQ)		
Product Information (PrI)	Clear explanation of what the company offers and product details	Dou and Tan (2002), Expert panel's proposal Fettah
Company Information (CoI)	Information about the company, representation of the company, location, facilities etc.	Expert panel's proposal
Currency (Cur)	Up-to-dateness of the content, reflecting the current state	Lee and Kozar (2006), Chou and Cheng (2012), Cebi (2013), Ecer (2014)

End of Table 1

Criteria	Definition	Studies
Export orientation (ExO)	Information about export activities, distributors, certificates, exhibitions etc.	Expert panel's proposal
System Quality (SyQ)		
Navigability (Nav)	Ease of navigation within the website, obtaining necessary information	Lee and Kozar (2006), Lin (2010), Chen <i>et al.</i> (2012), Ting <i>et al.</i> (2013), Kincl and Štrach (2012), Chou and Cheng (2012), Cebi (2013), Ecer (2014)
Accessibility (Acc)	Ability to access the website and its links	Lin (2010), Chou and Cheng (2012), Akincilar and Dagdeviren (2014), Cebi (2013), Ecer (2014)
Attractiveness (Att)	Visual attractiveness of design, layout, and presentation of information	Lin (2010), Karmokar and Singh (2012), Yu <i>et al.</i> (2011), Kincl and Štrach (2012), Akincilar and Dagdeviren (2014), Cebi (2013)
Service Quality (SeQ)		
Security (Sec)	Privacy rights of users are protected, security policies are clearly stated	Sinkovics and Penz (2006), Chen <i>et al.</i> (2012), Yu <i>et al.</i> (2011), Chou and Cheng (2012), Akincilar and Dagdeviren (2014)
Reliability (Rel)	Reliable, accurate and consistent contents	Yu <i>et al.</i> (2011), Chou and Cheng (2012), Akincilar and Dagdeviren (2014), Ecer (2014)
Responsiveness (Res)	Interactivity of website, communicating with visitors and providing help if necessary	Lee and Kozar (2006), Chen <i>et al.</i> (2012), Ting <i>et al.</i> (2013), Chou and Cheng (2012), Akincilar and Dagdeviren (2014), Cebi (2013)

2. The AHP methods

AHP, developed by Saaty (1980), addresses how to determine the relative importance of a set of activities in an MCDM problem. AHP combines subjective assessments based on qualitative criteria and objective assessments based on quantitative criteria analytically (Saaty *et al.* 2015). The construction of the method is based on three principles: structure of the model; comparative evaluation of the substitutes and the criteria; synthesis of the priorities. AHP has been widely used in solving many complicated decision-making problems in the literature (Dagdeviren, Yuksel 2008; Fox 2015; Franco 2014; Mosadeghi *et al.* 2015).

In the first step, a complex decision problem is structured as a hierarchy. AHP initially breaks down a complex multi-criteria decision-making problem into a hierarchy of interrelated decision elements (criteria, decision alternatives). With the AHP, the objectives, criteria, and alternatives are arranged in a hierarchical structure similar to a family tree. A hierarchy has at least three levels: overall goal of the problem at the top, multiple criteria that define alternatives in the middle, and decision alternatives at the end (Albayrak, Erensal 2004).

The second step is the comparison of the alternatives and the criteria. Once the problem has been decomposed and the hierarchy is constructed, prioritization procedure starts in order to determine the relative importance of the criteria within each level. The pairwise judgment starts from the second level and finishes in the lowest level, alternatives. In each level, the criteria are compared pairwise according to their levels of influence and based on the specified criteria in the higher level (Albayrak, Erensal 2004). In AHP, multiple pairwise comparisons are based on a standardized comparison scale of nine levels (Table 2).

Table 2. Nine-point intensity of importance scale and its description

Definition	Intensity of importance
Equally important	1
Moderately more important	3
Strongly more important	5
Very strongly more important	7
Extremely more important	9
Intermediate values	2, 4, 6, 8

Let $C = \{C_j \mid j = 1, 2, \dots, n\}$ be the set of criteria. The result of the pairwise comparison on n criteria can be summarized in an $(n \times n)$ evaluation matrix A in which every element a_{ij} ($i, j = 1, 2, \dots, n$) is the quotient of weights of the criteria, as shown in Eq. (1):

$$A = \begin{bmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{n1} & a_{n2} & \dots & a_{nn} \end{bmatrix}, \quad a_{ii}=1, a_{ji} = 1/a_{ij}, a_{ij} \neq 0. \tag{1}$$

At the last step, the mathematical process commences to normalize and find the relative weights for each matrix. The relative weights are given by the right eigenvector (w) corresponding to the largest eigenvalue (λ_{\max}), as

$$Aw = \lambda_{\max}w. \tag{2}$$

If the pairwise comparisons are completely consistent, the matrix A has rank 1 and $\lambda_{\max}=n$. In this case, weights can be obtained by normalizing any of the rows or columns of the matrix (Li, Liu 2015).

It should be noted that the quality of the output of the AHP is strictly related to the consistency of the pairwise comparison judgments. The consistency is defined by the relation between the entries of A : $a_{ij} \times a_{jk} = a_{ik}$. The consistency index (CI) is:

$$CI = (\lambda_{\max} - n) / (n - 1). \tag{3}$$

The final consistency ratio (CR), usage of which let someone to conclude whether the evaluations are sufficiently consistent, is calculated as the ratio of the CI and the random index (RI), as indicated in Eq. (4):

$$CR = CI/RI. \tag{4}$$

The number 0.1 is the accepted upper limit for CR. If the final consistency ratio exceeds this value, the evaluation procedure has to be repeated to improve consistency. The measurement of consistency can be used to evaluate the consistency of decision-makers as well as the consistency of overall hierarchy.

3. Empirical analysis

Our model is developed in four phases; structuring the goal, determination of criteria, weighing and ranking the criteria by means of AHP, calculation of precedence of the websites. Our goal is evaluation of SME websites and their effectiveness from the foreign trade aspect.

3.1. Determination of criteria and sub-criteria

Determining the criteria is critical for any decision-making problem. Previous studies on website evaluation are considered at this stage. The scarcity of the studies on the impact of website effectiveness on foreign trade success has led us consulting professionals. An experts' panel including academics and foreign trade managers is constructed to assess the criteria contributing the efficiency of websites. The experts' panel included two academics and five senior export managers with more than 15 years of experience in export trading. Two academics are the authors of this article; one of them has considerable experience in foreign trade prior to his full-time researcher job. The other author has significant expertise in multi-criteria decision making models and author of numerous articles in this field. Senior export managers have been chosen from different industries to reflect the views of experts from different fields. The members of experts' panel are from the sectors of iron and steel, textile, medical equipment, furniture and plastic household goods. The criteria, determined by literature review have been assessed by the experts' panel. This assessment has been conducted with the help of a preliminary questionnaire designed as 5-point Likert scales. We calculated the averages for each criterion based on the individual evaluation of experts and determined the criteria to be employed in the study. The sub-criteria about system quality and service quality employed in the study (seen in Table 1) were largely respected sufficient as these criteria are common in evaluating any websites.

However, information quality and the messages conveyed to the end-users via website have been considered as a distinguishing aspect of an exporter's website. Thus, export orientation of the company (i.e. exhibitions, certificates, foreign representatives etc.) reflected in the website was suggested as effective criteria by the expert panel. Detailed product and company information were also included as success criteria with the proposal of the expert panel. As far as we are concerned, export orientation hasn't been considered as an evaluation criteria in the previous studies. Although about 95% of the SMEs utilize their websites for information provision for their clients (Madill, Neilson 2010), company and product information haven't been assessed in previous website evaluation studies. Only Dou and Tan (2002) included product information in their website evaluation research. The sub-criteria pertaining to the information quality are among distinctive features of our study compared to other website evaluation studies. The parameters contributing to designing an efficient

website for an exporter company are presented in Table 1. The hierarchy of the model is configured based on the adopted 3 criteria and 10 sub-criteria.

3.2. Weighing the criteria

Weighing and ranking of the criteria and sub-criteria are performed utilizing the AHP which is an effective tool for the evaluation of qualitative criteria. The weights of the criteria were obtained with a unique questionnaire in the AHP method. The questionnaire allowing the decision makers to compare each pair of criteria based on their own knowledge and experience was constructed. The respondents evaluated the relative importance of each criterion comparing it with the competing criteria on the other side. Traditional format for AHP questionnaire has a nine-point scale. The description of this scale is demonstrated in Table 2. The comparisons, performed by personal judgments and the expertise of the participants, are critical in producing reliable results. Therefore, we sent the questionnaires to the target group made up of members who have 11,3 years of experience on average in foreign trade. The target group has been chosen from the employees of SMEs (with less than 10 million USD turnover and 150 employees) who are engaged in export business and willing to contribute our research. The respondents are working at the export departments of the SMEs or in the case of not having such a specific department; they are the employees who perform export activities of the company. They are representatives of their companies in terms of their foreign marketing and sales.

The assistance of local Chamber of Industry and Development Agency enabled us to access and recruit the target group. Every respondent was contacted via telephone or e-mail and explained the aim and the structure of the questionnaire to increase consistency and transparency. In total, 49 experts contributed to our research completing the questionnaires. The weights are calculated by the geometric mean of the values as this is a group decision-making procedure. Table 3 exhibits pair-comparison matrix and weights of criteria. Table 4 exhibits local and global weights of sub-criteria obtained by AHP method. Global weights of sub-criteria are calculated by multiplying weight of hierarchical criteria with the local weight of sub-criteria.

The comparisons are carried out via subjective personal judgments and naturally, inconsistency might be faced. Therefore, consistency confirmation is carried out to evaluate the degree of consistency between the pairwise comparisons. It is confirmed that consistency ratio is below the critical value of 0.1 at all levels (CR of criteria = 0.04; CR of IQ sub-criteria = 0.05; CR of SyQ sub-criteria = 0.04; CR of SeQ sub-criteria = 0.10). Therefore, the results are robust.

Table 3. Pair-comparison matrix and weights of criteria

Criteria	Information Quality (IQ)	System Quality (SyQ)	Service Quality (SeQ)	Weights
Information Quality (IQ)	1	1.94	1.51	0.461
System Quality (SyQ)	0.52	1	1.14	0.270
Service Quality (SeQ)	0.66	0.88	1	0.269

Table 4. Local and global weights of sub-criteria

Criteria	Sub-Criteria	Local Weights	Global Weights
IQ	Product Information	0.355	0.164
	Company Information	0.181	0.083
	Export Orientation	0.106	0.049
	Currency	0,358	0,165
SyQ	Navigability	0.453	0.122
	Accessibility	0.413	0.112
	Attractiveness	0.134	0.036
SeQ	Security	0.350	0.094
	Reliability	0.440	0.118
	Responsiveness	0.209	0.056

3.3. Ranking of the websites

The websites of three SMEs operating in household plastics sector were chosen for assessment. It was attempted to show if any of the companies possess more advantage in gaining clients via their websites. It is possible to rank the websites for their efficiency using reliable weights of criteria obtained by AHP methodology. Alternative websites are ranked in the frames of the sub-criteria by experts' panel. The experts' panel consisting of seven members who contributed to the selection of the criteria (section 3.1) has performed the ranking of the websites. In the ranking phase, the panel selected the determined linguistic values given in Table 5 for their assessment of each criteria for a particular website. Then, the expressions are converted into scale values to be used in the calculations. The scale values are obtained using fuzzy numbers as developed by Cheng *et al.* (1999). The panel examined the websites and expressed their personal judgments for each of the sub-criteria verbally as very good, good, fair, poor and very poor. Then, the panel reached a consensus on each criteria suggesting the group opinion as one of the five verbal expressions stated above. In order to utilize verbal opinions of experts in the ranking, transformation of them to numerical values is needed. The approach of Cheng *et al.* (1999) is adopted at this stage. They proposed a model to translate verbal linguistic values expressing opinions into the mean of fuzzy numbers. The expert opinions expressed in linguistic values are translated into the scale values exhibited in Table 5 and used to measure the sub-criteria for the website of each company.

Table 5. Linguistic values and scale values

Linguistic value	Fuzzy numbers	Scale value
Very good (VG)	(0.75, 1.00, 1.00)	1
Good (G)	(0.50, 0.75, 1.00)	0.75
Fair (F)	(0.25, 0.50, 0.75)	0.50
Poor (P)	(0, 0.25, 0.50)	0.25
Very poor (VP)	(0, 0, 0.25)	0

Table 6. Ranking of alternative websites

Sub-criteria	Global Weights	Company 1			Company 2			Company 3		
		Linguistic Variable	Scale Value	gwxsw	Linguistic Variable	Scale Value	gwxsw	Linguistic Variable	Scale Value	gwxsw
Product Information	0.164	VG	1	0.164	G	0.75	0.123	VG	1	0.164
Company Information	0.083	G	0.75	0.063	P	0.25	0.021	G	0.75	0.062
Export Orientation	0.049	P	0.25	0.012	P	0.25	0.012	VP	0	0.000
Currency	0.165	F	0.5	0.083	F	0.5	0.083	P	0.25	0.041
Navigability	0.122	G	0.75	0.092	P	0.25	0.031	F	0.5	0.061
Accessibility	0.112	G	0.75	0.084	F	0.5	0.056	G	0.75	0.084
Attractiveness	0.036	F	0.5	0.018	F	0.5	0.018	VP	0	0.000
Security	0.094	F	0.5	0.047	F	0.5	0.047	F	0.5	0.047
Reliability	0.118	G	0.75	0.089	P	0.25	0.030	F	0.5	0.059
Responsiveness	0.056	G	0.75	0.042	G	0.75	0.042	P	0.25	0.014
Total				0.692			0.462			0.533

The preference ranking of the websites is determined by using global weight values (Table 4) and the linguistic measurement scale (Table 5). The calculations are given in Table 6. The results show that preference rankings of the websites are as follows: Company 1, Company 3 and Company 2. The ranking indicates that the interested parties will probably favour website of Company 1 over others. This advantage can help Company 1 to increase prospects of turning visitors into clients and satisfy existing ones. Another implication of the ranking is that company 2 and 3 should take a closer look at the website of company 1 as a benchmark and get ideas for how to improve their website.

3.4. Discussion

Samiee (1998) argues that communicating with target customers successfully is the key factor for website effectiveness. Effective use and capabilities of websites have a facilitating role in increasing the exports of SMEs (Hajidimitriou, Azaria 2009). Websites play this role through lowering the effects of distance between the parties and providing a medium for constructing an export network. Sinkovics and Penz (2006) assert that SME websites need to be empowered in order to gain benefits of websites. There are many website evaluation studies which contribute to this empowerment efforts in the established literature. However, evaluation of SME websites from the view of international trade is an issue not addressed sufficiently and our results can have important implications.

Many SMEs adopt and sustain websites as they regard websites as a tool for accessing new markets and expanding their export sales. Therefore, SMEs allocate funds and bear costs of websites expecting to get profits of them. The key problem we dealt in our empirical analysis is the impact of websites on the export potential of SMEs. Our aforementioned results portray the views of export specialists and have a potential to provide a proper approach for SME website building. More significant sub-criteria need to be drawn more attention if the corporations plan to increase the flow of foreign customers based on their websites.

The global weights of the criteria, shown in Table 4, range from 0.036 (attractiveness) to 0.165 (currency). The ranking of the criteria depicts the hierarchical importance which can guide professionals and researchers in evaluating SME websites. Findings of the study indicate that information quality (0.461) is the most important factor affecting SME website quality. This is consistent with Lin (2010) and provides further evidence for Sinkovics and Penz (2006) who put forth that the websites serving the visitors' primary objectives increase end-user satisfaction and motivation to use websites as an information basis. The primary objective within the international trade scope is obtaining accurate information to be able to establish reliable connections globally. The experts value system quality (0.270) and service quality (0.269) as equally important factors in terms of website efficiency. The weights of criteria support the results of Ecer (2014) who evaluated banking websites: information quality (0.539), service quality (0.163) and system quality (0.298). The analytic results show that; currency and product information are the most critical and almost equal factors when global weights of sub-criteria are considered. Foreign trade experts prioritize "current" and "detailed" product information in gaining new customers via websites.

Navigability, reliability, and accessibility are among the other critical factors as illustrated in Table 4. Interestingly, export orientation is not a critical factor as the expert panel proposed. This implies foreign trade experts are focused on the product and the ability of the company to supply the product regardless of international network of the company. Glavas and Mathews (2014) demonstrated that previous international networking and business experience are not essential for the international business success of SMEs supporting this conclusion. Responsiveness of the website is not considered as a significant factor for website effectiveness. Responsiveness is more important for the websites of e-commerce (Lee, Kozar 2006) and hospitality (Akincilar, Dagdeviren 2014) which the users need interaction. Our results pertaining responsiveness is counter-intuitive which suggests trade experts perceive websites as a communication channel rather than a transaction platform. Attractiveness has the lowest global weight indicating foreign trade practitioners are less interested in the style.

Our approach and the results on the website ranking show that it is possible to use multi-criteria decision-making methods in developing a model for assessing websites. The interdependence between the criteria and sub-criteria has been analysed by the experts' panel as a first step in the development of the model. It is determined that there is no significant interdependence between the criteria and sub-criteria. In other words, the impact of one criterion on the other is insignificant (i.e. the level of system quality has no considerable influence on information quality). In addition, it is decided that there is no interdependence between the levels. The outcome of the preliminary assessment of the problem showed that the AHP method is more suitable in the solution of the problem. The AHP hierarchy of our method in

evaluating SME websites and discovering best alternative is illustrated in Figure 1. The figure depicts the levels of our decision-making process and the aspects related to each level hierarchically. The proposed model can enable SMEs measure and benchmark the effectiveness of their corporate websites. The implementation of the model can guide SMEs in exploring the areas of improvement in their websites, particularly in terms of export facilitation.

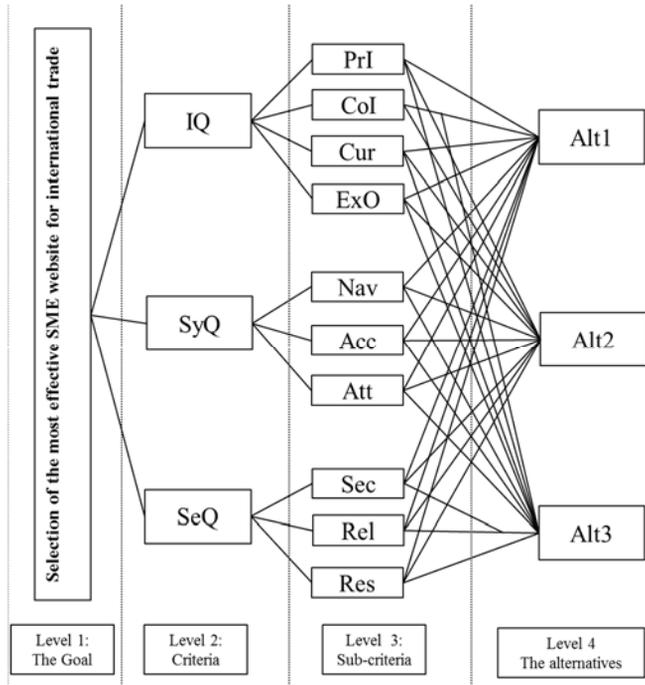


Figure 1. Hierarchy of the AHP model

The main objective of the study is discovering the factors that make a SME website good for international trade. The results of the study reveal the hierarchical importance of the factors which serve the SMEs in obtaining an efficient website in terms of their foreign trade. First of all, the SMEs need a website that provides current information for the trade partners. Then, including detailed product information is an important aspect of a successful website in terms of international trade. Navigability, reliability and accessibility are following important features of a good website for foreign trade. Security, company information, responsiveness, export orientation and attractiveness are also criteria that contribute having good websites for international trade respectively.

Conclusions

The websites of companies are open exhibitions that provide a fast and borderless channel of conveying information and gaining new customers. The aim of this research is to design a practical, robust, reliable, flexible and comprehensive model for assessing websites of SMEs

from an international trade perspective. The literature has suggested many criteria affecting website effectiveness. We further investigated the website effectiveness of SMEs from the focus of international trade participants. The AHP method, which synthesizes decisions of multiple experts providing consistent and unbiased results, is employed. The criteria assigned for the issue of SME website evaluation acquired by literature review and experts' panel.

The criteria assessment and website ranking are performed by foreign trade experts. The results suggest that product information and currency are the most important criteria for the website of a SME involved in foreign trade. Navigability, reliability, and accessibility are the subsequent criteria. Surprisingly, export orientation hasn't been viewed as a critical factor by experts. However, this is an encouraging result for SMEs planning to enter foreign markets and become a global enterprise. Participants of international trade value the goods or services offered more than trade experience of the partners. Results also indicate that SME websites are viewed as a communication avenue rather than a transaction platform.

The proposed model shows that it is possible to measure the preference of websites based on certain criteria. The evaluation results can provide assistance for both designers and managers in developing policies for improving SME website effectiveness. Our results can contribute enhancing SME websites and increase their role in entering foreign markets and sustaining competitiveness.

The research was based on foreign trade expert assessments producing dependable results. However, this fosters a potential limitation as not all participants of international trade are experts and they may have different perceptions. Effects of the heterogeneity of audience can be dealt with by employing different-level expertise groups in future works. Another extension to this study would be utilizing integrating another MCDM tools to provide more precise results.

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