Investigating antecedents and their consequences of usability in online donations: the case of university students’ community services programs

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Abstract: This research aims to investigate the main antecedents of the usability of electronic donation of non-profit organisation (NPO) website (aesthetics, information quality and creditability) and its consequences (trust, satisfaction and loyalty). To collect the data, we used online means of donations as part of community service programs implemented by universities within the Jordanian education sector. We asked students from Middle East universities, located in Jordan, to navigate a NPO website (King Hussein Cancer Foundation (KHCF)) and then we provided them with $15 incentives to donate. We found that aesthetics of non-profit website, information quality and credibility had positive impact on the usability of electronic donation for non-profit website. Furthermore, we found that the usability of electronic donation of NPO website had positive impact on donors’ trust and satisfaction of the website. In turn, we found that donors’ trust and satisfaction had significant effect on students’ electronic loyalty.

Keywords: NPOs; non-profit organisation; aesthetics; information quality; credibility; usability; donors’ satisfaction; donors trust; loyalty; Jordan.

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T. Shatnawi and R.S. Algharabat

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1 Introduction

Marketing is needed for non-profit as well as for profit organisations. However, the challenge for non-profit firms nowadays is to take advantage of the high quality of online techniques and to reflect it into its website design. Furthermore, non-profit firms should secure continuous donations flow and open effective channels of communication with its current and potential target audience to gain support for charity causes (Long and Chiagouris, 2006).

Donors are willing to give more if they are addressed and approached in an acceptable way (Frey and Meier, 2004). However, non-profit organisations (NPOs) are facing, recently, many obstacles once it comes to moving the charity work online. For example, Goatman and lewis (2007) stated that there are limited amounts of empirical research that focuses on the use of the internet by charities. Moreover, this could be explained by the fact that most existed research related to donation focus on personal motivations towards donation such as feelings of guilt for not giving, sympathy and empathy towards the cause (Amos, 1982; Cialdini et al., 1981; Dawson, 1988), hopes of strengthening social identity (Brady et al., 2002), and social status motivation (Becker, 1974). To that point, Saxton (2001) argued that the internet still provides numerous opportunities for charities which are behind businesses with respect to their adoption and use of internet technology. Switzer (2012) indicates that 65% of the young donors learned about a not-for-profit organisation via its website. The author emphasises on the importance of non-profit website design to stimulate online giving. Berkshire (2012) posits that young donors always seek to learn, via the non-profit website, about issues such as how their money used to make a tangible impact to the societies.

Varadarajan and Menon (1988) assert that donation is part of social, non-profit or cause marketing, which is the practice of donating proceeds from product sales to designate charitable causes. However, Benda pudi et al. (1996) define donations as gifts or contribution for charitable purposes to benefit other people, groups or organisations. Therefore, the authors posit that donation takes various forms, including cash, time, goods, resources and body parts. However, for the purpose of this research, we adapted the definition of donation to reflect money as resources and time to reflect the meaning of
Investigating antecedents and their consequences of usability

voluntary. Hoefer (2012) states that online donation refers to a new way which provides donors to donate directly for non-profits firms using their websites. The author asserts that online donation is an alternative tool that provides the world with low-cost alternatives and supports the traditional offline channel for fundraising.

Within the context of non-profit websites in Jordan, Middle East, what actually matters in term of setting priorities within NPOs sector is;

• to build positive attitudes towards online donation as a new channel that often support offline means of donation
• to create online donation environment that can be attractive in terms of design, persuasiveness to donate (e.g., aesthetics, information content and credibility that stimulate usability of e-donation)
• to build disciplined for online donation behaviour.

Therefore, this research aims to answer the following research questions:

1 Within the context of Jordanian non-profit website, how do website aesthetics, website information quality and website credibility impact website usability of e-donation?
2 Within the context of Jordanian non-profit website, how does website usability of e-donation impact donors’ satisfaction and trust?
3 Within the context of Jordanian non-profit website, how do donors’ satisfaction and trust impact their e-loyalty?

2 Background

2.1 Non-profit sector evolution globally

Non-profit sector is expanding in its size, thus, different terminologies are used to describe some of the NPOs-related activities (e.g., civil society, charity, philanthropy, cause marketing, third sector, hidden sector and NGOs) because it is so large that this sector merits more disclosure of operating performance (Clyde, 1994). Kotler (1979) posited that this strong third sector constitutes a middle way for meeting social on the other. Third sector organisations tend to be socially responsive and service-oriented. They specialise in the delivery of social services that are not adequately provided by either business or government.

According to networkforgood.com for the past several years, year-over-year growth in online giving has outpaced growth in overall giving, as online giving methods adapt to changing technology and habits. Network for Good’s Online Fundraising issues periodical annual reports that looks at online donation trends and fundraising best practices to help fund raisers organisations to get more from their online fundraising efforts. In 2014, the annual report ‘2014 Digital Giving Index’ posits that $233 million in online giving distributed to 45,000 non-profits through Network for Good’s platform. Therefore, online giving grows 9% higher in 2014 compared with 3% growth for overall giving.
Based on the report, fundraising is still about the relationship between the NPO and the donor. Therefore, it is important to understand how an online giving channel can affect this relationship. Giving is an emotional and personal experience; thus, fundraising technology needs to improve the online giving experience with the donors to match up with their expectations. Online donors expect a connection – not simply a transaction – with the organisations they support. Thus, donor’s online experience is directly tied to his or her likelihood of giving, giving more – and giving more often. Therefore, online fundraising is all about creating and building relationships with donors which should be prioritised in the giving experience.

2.2 Internet penetration and demographics

According to www.internetworldstats.com, internet users are growing year after year in its global picture, based on population numbers, 45.6% of internet users are located in Asia followed by Europe, Latin America, Africa, North America, Middle East and Australia, respectively. What contributed to this is the growing number of internet users globally, Jordan internet penetration rate is growing rapidly and it represents 86.1% of the total population at the end of 2014. According to Arabadvisor.com, Jordanians in recent times are major holders of credit and debit cards, and there are now ~2.5 million card holders, that could be used for electronic payments. In addition, Jordanians are using mobile phones and online mechanisms for banking and for bill paying in rapidly increasing numbers. Youth in Jordan have highly information technology awareness, just as they are in other countries. The difference between Jordan and some other countries is that young citizens, those under 25 comprise 50% of the population. These are the biggest potential users of e-commerce, and the present users of mobile phones and e-banking services. The country is rated relatively highly for e-commerce readiness on a regional basis. This is because much of the ICT infrastructures are in place to enable e-commerce adoption.

2.3 Non-profit sector in Jordan

Non-profit sector, in Jordan, is in a continuous expansion in last decade and it is playing an essential role in social services, political, educational, and professional and health areas. The Comprehensive Guide of Civil Society Organisations in Jordan is a joint effort between the Phenix Center for Economic and Informatics Studies and the Friedrech–Ebert–Stiftung which attempts to present an inclusive database for civil activists in the public life of Jordan. The Guide presents a list of different Jordanian civil society organisations, in addition to foreign organisations working in the kingdom. The organisations included in the Guide are classified according to their goals and scope of work, the categories include; employer unions and their societies, chambers of commerce and industry, trade unions and professional associations, organisations for individuals having disabilities, environmental organisations, cultural and scientific organisations, youth and sport clubs, health care organisations, child and orphans care, women organisations and multipurpose societies, in addition to organisations that are concerned with community protection and development as well as human rights, and foreign organisations. The size of civil society organisations are growing particularly
in areas-related to refugees due to the strategic position of Jordan in the Arab world and Middle East in general. Awareness among Jordanians that Jordan has limited resources and hence public sector alone cannot support local NGOs, therefore needs support from private sector and businesses, so Jordanian people are willing to donate in areas such as; health, environmental, special needs people, poverty and unemployment.

3 Literature review and conceptual framework

3.1 Website design constructs

The design of websites represents an excellent framework for users to navigate through the website, to enhance their positive intentions towards the website, and to allow users to control their own tasks. Therefore, the linkage between web design and usability (Flavian et al., 2006) are important. However, for the purpose of this research, we focus on the related constructs which should be relevant for online donation domain within NPOs websites.

The development of the website design constructs, in order to enhance website usability, vary based on the classification of websites subject or use situation (i.e., educational, entertainment, commerce and charity), development stage and target market. For example, Rowley (2001) identified four developmental stages of organisational websites; contact, interact, transact and relate. At the contact level websites are largely focusing on promoting a corporate image and providing general information. The interactional level related to targeting specific audiences. Transactional level centres on websites ability to move into the domain of order handling and online purchasing. The relational level facilitates two-way communication. Relating these stages to our research, it is important for NPOs websites to move from contact level towards relational level in order to invest effectively in online donations.

Flavian et al. (2009) affirm that website design is a key factor for getting positive outcomes as it influences online consumers’ perceptions and behaviours. For instance, a website which designed to address simplicity and freedom of navigation provides clear, timely and accurate information. The authors propose the following guidelines for improving websites’ design; the design of the website should

- focus on the aesthetic appearance and vividness of the visualisation tools (such as: images, graphics, icons, animations and colours)
- be navigated easily
- provide high quality of information contents
- be efficient and easy for shopping process.

Furthermore, Lin and Gregor (2006) indicate that type of language used on online may attract or detract visitors. Chiew and Salim (2003) suggested that colours and font size are also important constructs for the design of websites.

Therefore, we aim to investigate the impact of aesthetic appearance of non-profit website (how to impress donators), non-profit website quality of information (how information presented and expressed to donators) and non-profit website credibility (how to convince donators with credibility aspects to gain trust) on usability of non-profit
website for e-donation. Moreover, we examined the impact of usability of non-profit website for e-donation on donors trust and satisfaction which in turn impact e-loyalty (Figure 1).

**Figure 1** Research model and hypotheses

![Research model and hypotheses diagram]

*Source:* Adapted from Flavian et al. (2009), Fogg et al. (2002), McKinney et al. (2002), Lee and Koukabek (2010, 2011)

### 3.2 Perceived usability

Perceived website usability is considered as an essential element in building store’s image, influencing shopping behaviour and providing services (Mandel and Johnson, 1999; Liang and Lai, 2002). Furthermore, Kim and Eom (2002) suggested that perceived website usability plays a critical role in achieving users’ satisfaction. Ranganathan and Ganapathy (2002) assert the importance of the perceived usability as a key dimension of website quality. Previous research defines perceived usability depending on different perspectives. For instance, Nielsen (1994) argues that website usability refers to:

- the ease of users learning to manage the system and to memorise its basic functions
- the efficiency of website design
- the degree of error avoidance
- users’ satisfaction.

Nielsen (2003a, 2003b) suggested that website usability “is a quality attribute that assesses how easy user interfaces are to use”. However, Flavian et al. (2006) stated that the concept of ease of use and usability should be separated and they should not be considered as one definition for usability because e-commerce literature uses the notion of usability more frequently. Furthermore, Flavian et al. (2006) stated that usefulness
should be considered as an equal definition of usability. The authors illustrated that perceived usefulness and perceived ease of use are the main determinants of user acceptance (Davis, 1989).

Flavian et al. (2006) postulated that, recently, several scales for quantifying the construct of usability have been developed. For example,

- the system usability scale (SUS)
- the software usability measurement inventory (SUMI) scale which was developed with the same objective as the SUS questionnaire, but structured the concept of usability around different sub-scales
- the scale of Lin et al. (1997), which was intended to evaluate the global usability of a website

Notwithstanding, Flavian et al. (2006) summarised the main elements which the notion of usability should cover;

- ease of understanding the structure of a system, its functions, interface and contents observed by the user
- simplicity of use of the website in its initial stages
- the speed with which the users can find the item they are looking for
- the perceived ease of site navigation in terms of the time required and action necessary to obtain the desired results
- the ability of user to control what they are doing, and where they are, at any given moment.

Thus, in the current research, we adapted Flavian et al. (2006) dimensions of perceived usability.

3.3 Aesthetics and usability

Aesthetics considers as a main part of the web atmospherics. Literature roots related to aesthetics have evolved with large numbers of studies (McManus and Furnham, 2006; Tractinsky and Lowengart, 2007; Porteous, 1996) in the fields of psychology and sociology. For instance, McManus and Furnham (2006) asserted that most of the initial studies of aesthetics associated this construct with music and arts. Porteous (1996) argued that aesthetics is related to the beauty. Thus, there is a natural disposition in humans’ nature for liking beautiful things and discard ugly. Aesthetics can be described as “a predominantly affect-driven evaluative response to the visual gestalt of an object” (Hassenzahl, 2008, p.291). Tractinsky and Lowengart (2007) defined aesthetics as a construct which is equal to beauty where beauty can be judged by subjective perceptions of objects which include symbolism, identity, image, meaning and evaluation of visual design properties.

Aesthetics studies in marketing cover both offline and online markets. For example, Kumar et al. (2013) posited the importance of shifting from conventional aesthetics objects of goods and physical products to servicescape. Within the context of non-profit
website, Thorlacius (2002) posited that non-profit websites should be organised in a way that makes donation easy. Reddy and Iyer (2002) argued that aesthetics aspect of a non-profit website should sufficiently motivate donors to give more. Accordingly, aesthetics aspects play an important role in supporting the content and functionality of a non-profit website. Previous research (e.g., Tractinsky et al., 2000; Lavie and Tractinsky, 2004; Ben-Bassat et al., 2006; Lindgaard et al., 2006; Desmet and Hekkert, 2007; Hartmann et al., 2008; Kim and Eom, 2002) found positive relationship between aesthetics of website and usability of the website. For instance, Lavie and Tractinsky (2004) found a positive relationship between a user’s aesthetic rating of a website and perceived usability of the website. Aesthetics in term of visual appeal play an important role in creating first impressions of a website (Lindgaard et al., 2006). The role of the first impressions on a website is long-lasting one. This conclusion is consistent with the halo effect. Hartmann et al. (2008) suggested that aesthetic features could overcome and compensate for poor usability experiences. However, with reference to the design factors of a website, a good design must provide not only beauty and appeal, but also high levels of usability, since it influences the affective states of users (Desmet and Hekkert, 2007).

An attractive design can evoke feelings of pleasure in the use of a website. As a consequence, an adequate degree of usability, related to a comfortable atmosphere, could create a positive bias in the consumers’ minds. In fact, a good level of perceived usability could lead to higher levels of satisfaction, trust and loyalty towards a specific website (Flavian et al., 2006; Kim and Eom, 2002). However, previous research has proved that if a design is not enjoyable to use, it causes the user to interpret it as less usable. For example, Bennett (2009) stated that procedures of donation; the way “to make a donation needs to be clearly visible”. The ‘donation’ button should be easy to locate and stand apart from the other design elements on a webpage. It should be bigger buttons with short and concise messages to attract donors’ attention and to trigger their response usage.

Tractinsky et al. (2000) asserted that perceived aesthetic is highly correlated with perceived usability. Ben-Bassat et al. (2006) conducted an experiment with four simulated computer-based phone books for data entry tasks. The authors found that system’s aesthetics affected users’ assessment of usability and vice versa. Thüring and Mahlke (2007) found a similar relationship between perceived usability and perceived aesthetics from an experiment to examine users’ reactions to four portable digital audio players after actual use.

Lee (2013) relied on Lee and Koubek’s (2010, 2011) studies and examined the changes in the relationships among user satisfaction and users’ perceptions of usability and aesthetics according to use situations. The experiment was conducted using 15 existing websites with similar levels of usability and aesthetics. The authors’ results indicated that the relationships among perceived usability, perceived aesthetics, and user satisfaction depend on how users perceived the use purposes and interaction types of the websites. Whereas the relationship between perceived aesthetics and user satisfaction was stronger for the websites mainly providing useful information, regardless of the existence of a specific usage goal. Furthermore, the authors found a strong relationship between perceived usability and perceived aesthetics when users mainly wanted to obtain information rather leisure and relaxation. Therefore, this research hypothesises that:
In investigating antecedents and their consequences of usability

H1: There is a positive relationship between non-profit website aesthetics design and website usability for e-donation.

3.4 Information quality and usability

Online shopping atmosphere and layout design, formed by both the content and structure of the information provided by websites, affect consumers’ willingness to make purchases (Chen et al., 2012). As information constitute the whole content (any technique for making inferences by objectively and systematically identifying specified characteristics of messages) of data and reflect messages within website (Holsti, 1969). Chaffey et al. (2000) suggests that high-quality content, ease of use, quick downloading and frequent updating (in order of importance) are determinants of customers’ intentions to revisit websites.

Information quality is defined as information that is fit for use, or meets the expectations of its users. For example, Richard (2005) stated that the perception of website content can be measured by how informative it is, if it provides detailed and specific information on products or other relevant topics. The author indicated that specific product information positively related to consumer’s attitude towards the website (positively or negatively). Sharma and Lijuan (2015) showed that information quality, e-service quality and usefulness are directly linked to e-commerce website usability. The authors assert that information quality and online service quality are the key determinants for user satisfaction and sustainability of e-commerce technology.

Fan and Tsai (2010) indicated that satisfaction of website users for product information and service information provided by the shopping website are important for website success. Within website context, DeLone and McLean (1992, 2003) define information quality as the customers’ perception of the quality of information presented on a website. The authors posit that if a website lacks the information that customers need, its entertaining design or ease of search will not keep customers from leaving the website. Wixom and Todd’s (2005) model consisted of nine fundamental determinants of quality in information technology context, four determinants under the rubric of information quality (the output of an information system) and five determinants describe system quality. Information quality in the Wixom and Todd’s (2005) model refers to e-commerce content issues and covers; completeness, accuracy, format and currency aspects of information delivered by e-commerce marketplaces. Sargeant et al. (2007) study investigated the impact of information quality in term of education among other constructs on the number of new donors/users which a non-profit website can attract. The authors found that education, accountability and accessibility are highly correlated with the total value of online donations offered. The authors posited that fundraising performance will be enhanced if a website provides an appropriate education facility to learn about the cause or access information on a particular issue related to the charity’s mission.

Other research in website usability, that attempted to examine the main dimensions and measurement scales of a website quality, is the study of McKinney et al. (2002). The authors classified website quality into information quality and system quality. The author stated that perceived information quality is a multidimensional construct expressed in term of; understandability, reliability and usefulness. Therefore, if the website secured information quality in all of its aspects, the probability for using the website will increase.
Accordingly, information quality is actually matters in term of usage. For the purpose of this research, McKinney et al. (2002) perspective will be adapted, where information quality is a multi-dimensional construct made up of; understandability, reliability and usefulness. Understandability of website’s performance related to the website ability to provide information which is clear in meaning, easy to comprehend and easy to read. Reliability of website’s performance related to the website ability to provide information that is trustworthy, accurate and credible. Usefulness is related to website’s performance to provide information that is informative and valuable. Therefore, we hypothesis:

**H2: There is a positive relationship between non-profit website information quality and usability of non-profit website for e-donation.**

### 3.5 Perceived credibility and usability

According to Fogg (2003), credibility “exists only when you make an evaluation of a person, object, or piece of information”. Credibility in its simplest form is the persuasive nature of the medium; shortly there are just two key dimensions of credibility: trustworthiness and expertise (Fogg, 2003; Fogg and Tseng, 1999). Fogg (2003) posited that trustworthiness measured in the terms of well-intentioned and unbiased. However, expertise measured in the terms of perceived knowledge, skill and experience. According to Fogg and Tseng (1999), a high level of credibility incorporates both a high level of trustworthiness and expertise. Hence, a website cannot be considered credible if it does not entail both of these concepts. Therefore, users would tend to look for both trustworthiness and expertise cues to establish a level of credibility of the information in question. In this routine a user would look at who wrote some information to assess whether the author is trustworthy and an authority on the matter. If users can identify authors and hence evaluate their expertise a strong credentials and objectivity would serve as strong credibility cues.

Therefore, for the purpose of this research, we followed Long and Chiagouris’s (2006) study which developed a scale to measure credibility in non-profit website context. The authors combined a scale based on Fogg et al. (2002) and McMurdo (1998) studies to form the basis of the credibility measurement. Long and Chiagouris (2006) chose only 13 items from Fogg et al.’s (2002) study representing the subjective interpretation of credibility and four items form McMurdo (1998). The authors posited that credibility is a presence factor in the thoughts of each online donor. Thus, it is unreasonable to expect people or corporations to give their time or money to a charity if they have not developed an advanced credible relationship with the NPO. Several studies have found positive associations between website use and credibility ratings of online news and political information (e.g., Johnson and Kaye, 2000; Kiousis, 2001). For instance, Westerwick (2013) investigated the effects of sponsorship, website design and Google ranking on the credibility of online information. Results showed that sponsor credibility affected information assessment, whereas a more appealing website design could not compensate for low sponsor credibility. Additionally, the author found that a high search-engine ranking increased sponsor credibility and thus influenced information credibility indirectly.
Nielsen (2000) asserted that photographs could increase the perceived credibility of a charity and a cause. Kensicki (2003) posited the importance of credibility of a website as a measure of trustworthiness. The author asserted the importance of testimonials, case studies and photographs to create awareness on a charity website. These elements can also serve to make a charity website more credible and highlight the charity’s work and beneficiaries. Kensicki (2003) showed a strong correlation between photographs inclusion, which increase perceived trustworthiness of a charity website, and perceived credibility. Legitimate sites try to alleviate consumers’ fears by using symbols on their sites such as a seals available from official Bureaus, TRUSTe and other trust auditing organisations to increase trust and credibility and enhance the consumer’s perception of the website (Fogg et al., 2002).

Robins and Holmes (2008) explored the possible link between page aesthetics and a user’s judgement of the site’s credibility. Findings indicated that when the same content is presented using different levels of aesthetic treatment, the content with a higher aesthetic treatment was judged as having higher credibility. Long and Chiagouris (2006) examined the relation between website design in general and credibility sense. The study illustrated the importance of several credibility measures (particularly those related to site design) that are significantly related to attitude towards the site.

Smith (2007) theorised that organisations that are perceived as less credible are more likely to be ignored, while highly credible sources are more effective in creating positive attitude changes that an effective website could lead to increased interaction between the organisation and its members, increase the credibility of the organisation, and potentially lead to an increase in new members or in the activity levels of current members.

Kensicki (2003) explored the relationship between visual elements of webpage design and credibility of NPOs. She found that visually appealing websites corresponded with increased levels of perceived credibility for an organisation and a stronger intent on behalf of viewers to participate in the organisation given that a relationship has been demonstrated between perceived credibility and increased participation. Kensicki (2003) research in online settings had leveraged this fact, finding that colour schemes and other visual elements predict perceptions of credibility (Fogg et al., 2002; Robins and Holmes, 2008). Lowry et al. (2014) investigated the impact of design logos on traits of credibility (i.e., expertise and trustworthiness). The authors asserted that logos can trigger positive credibility judgements about the firm’s website and hence increase website perceived credibility (Haig, 2006). Therefore, we hypothesis:

\[ H_3: \text{There is a positive relationship between credibility of non-profit website and usability of non-profit website for e-donation.} \]

3.6 Usability and trust

The trust concept has different definitions. However, traditionally, Ganesan (1994) defined trust as a group of beliefs held by a person derived from his or her perceptions about certain attributes. Within the context of NPO this involves the website and donation. Therefore, trust is treated as a multidimensional construct (i.e., honesty and benevolence), to reflect such group of beliefs. Gundlach and Murphy (1993) define honesty as the belief that another person will keep his or her word, fulfill promises and be sincere. On the other hand, previous research (Larzelere and Huston, 1980;
Doney and Cannon, 1997) defined benevolence as the belief that one of the parties is interested in the wellbeing of the other without intention of opportunistically behaving, and motivated by a search for a mutually beneficial relationship. Sako and Helper (1997) postulated that perceived competence of the second party should be another dimension of trust. Coulter and Coulter (2002) defined competence as the degree with which the consumer perceives that the supplier is in possession of the necessary knowledge and skills to complete an agreement or exchange. Therefore, perceived competence is considered an important dimension especially in the analysis of online consumer behaviour (Roy et al., 2001; Pavlou, 2002). Therefore, for the purpose of this research in a non-profit website, we treated trust as a construct made up of three dimensions; honesty, benevolence and competence.

Previous research (Kim and Moon, 1998; Nielsen and Norman, 2000) asserted the positive relationship between website usability (website attribute) and trust. Muir and Moray (1996) posited the importance of usability to enhance trust. Bearden et al. (2001) posited the positive relationship between usability and self-confidence (defined as a consumer’s feeling of security and ability about his or her decisions and behaviours). Greater usability offers more security to website users. Kantowitz et al. (1997) asserted the positive relationship between familiarity and self-confidence and trust in technology. Flavian and et al. (2006) posited the positive relationship between usability and trust. Therefore, we hypothesis

\[H4a: \text{There is a positive relationship between non-profit website usability and donors trust.}\]

3.7 Usability and satisfaction

Similar to the trust construct, satisfaction has many definitions. However, at this study we adopted Flavian et al.’s (2006) definition of satisfaction as a favourable affective consumer conditions related to all aspects of consumer’s evaluation of the relationship (Anderson and Sullivan, 1993). Within the context of online, Spiller and Loshe (1998) posited the positive relationship between website design and consumer satisfaction. Previous research (Wolfinbarger and Gilly, 2003; Yoo and Donthu, 2001) on website quality attributes (navigation, interactivity features, content and the site’s organisation) posited the positive relationship between usability and customer’s attitude towards the website. Vijayasarathy’s (2004) study indicated a positive relationship between website effectiveness and consumer attitudes. Therefore, we hypothesis:

\[H4b: \text{There a positive relationship between non-profit website usability and donors’ satisfaction.}\]

3.8 Satisfaction and trust

The relationship between satisfaction and trust, within the online context, has been proved over the nascent literature. For example, Algharabat and Zamil (2013) found a positive relationship between satisfaction and trust. Helson (1964) asserted that satisfaction and trust are positively associated. Caceres and Paparoidamis (2007) posited the positive relationship between satisfaction and trust in business-to-business context. Kim et al. (2008) found that satisfaction guides to trust in an online retailer. Singh and Sirdeshmukh (2002) posited that satisfaction directly impacts trust.
Flavian et al. (2006) stated the positive relationship between satisfaction and trust. Thus, we hypothesize:

**H5:** There is a positive relationship between donors’ satisfaction with non-profit website and their trust to donate.

### 3.9 Trust, satisfaction and loyalty

Previous research on loyalty examined three different types; behavioural, attitudinal and combination of them (Jacoby, 1971; Gremler, 1995; Ghane et al., 2011). Therefore, we measured loyalty with its two main dimensions (attitudinal and behavioural) and tested the impact of satisfaction and trust on loyalty of donors within NPOs. The relationship among website satisfaction, trust and loyalty are well established in digital marketing literature. For example, Chiu et al. (2009) found a positive relationship between satisfaction and loyalty. Furthermore, evidences regarding the positive relationship between satisfaction and loyalty can be found on the work of Zhao (2010), Akbar and Parvez (2009), Chiu et al. (2009) and Anderson and Srinivasan (2003). Kim and Moon (1998) and Lee et al. (2000) stated that loyalty directly depends on the degree of trust. Similarly, Quelch and Klein (1996), Jarvenpaa et al. (2000) and Littlefield et al. (2000) posit that trust is a critical factor in stimulating purchase. Cyr et al. (2007) posited the positive relationship between e-trust and e-loyalty. Flavian et al. (2006) stated the positive relationship between e-trust and e-loyalty. Gefen (2000) asserted that consumer trust in a website is essential to e-loyalty (e.g., consumers’ willingness to buy from online retailer). Furthermore, previous research (Floh and Treiblmaier, 2006) posited that e-trust and e-satisfaction are key determinants for e-loyalty. Therefore, we hypothesis:

**H6:** There is a positive relationship between donors’ satisfaction and e-loyalty.

**H7:** There is a positive relationship between donors trust and e-loyalty.

### 4 Methodology

#### 4.1 King Hussein Cancer Foundation (KHCF)

According to www.KHCF.com, King Hussein Cancer Foundation (KHCF) is an independent, non-governmental, not-for-profit institution founded in 1997 by a Royal Decree to combat cancer in Jordan and the Middle East region. Furthermore, KHCF meets the growing demand of patients from Jordan and the region. The idea of the creation of this leading institution dates back to the mid 1980s in which cancer care in Jordan during this period was disorganised and sporadically distributed between individuals. Most wealthy patients would travel abroad to receive treatment, while those with financial hardship were locally treated with scattered resources. In 1984, the idea gained acknowledgement and was initiated; soon, governmental approval was granted for the innovative project. KHCF building was established with generous support from public charities, under the supervision of the Union of Voluntary Societies. Jordanians paid for this project with full faith that fighting cancer should not be left to the government alone since we are all affected with cancer. In 1997, the hospital opened its doors under the name of ‘Al-Amal Center’ which means ‘The centre of hope’.
available resources, the centre took its first steps with numbers of patients increasing steadily. On the 19th of September in 2002, there was an official ceremony to change the name of the centre to Honour the late King Hussein, who died of cancer. The new centre was thus named King Hussein Cancer Center with full royal support. Currently, the centre is undergoing major construction, renovation and expansion to increase the number of beds and meet the growing demand of patients from Jordan and the region.

4.2 Universities’ community services program

Community services program was launched periodically at both public and private universities aiming to encourage students to be community oriented. Hence, many university students have participated in different offline campaigns to help NPOs including KHCF to achieve its objectives either through monetary or voluntary tasks as part of the community service program. Universities’ administrations usually motivate students to participate in community service program and they create awareness among their student for such programs and support campaigns financially through a dedicated annual budget for such efforts. Therefore, Jordanian universities are conscious to invite their students to engage in such community services programs inside and outside campus as they consider this one of the important criteria required for the implementation of quality assurance standards.

4.3 Procedure and sampling

Jordanian youth represented by university students considered the ideal sample for investigating the antecedents of non-profit website usability for e-donation and its consequences, justification stems from the fact that majority of young people has past experiences with internet and online environment, more willing to accept new technology and mostly has the chance to engage with voluntary and community services programs inside universities campuses (Algharabat, 2014; Algharabat and Dennis, 2010). We employed a convenience sample due to the fact that we were not able to find an inclusive and updated list of the online donors in Jordan. Accordingly, conducting random sampling technique was not achievable (Algharabat et al., 2017). Accordingly, using convenience sampling technique is more applicable in the current study. Our sample consisted of 400 undergraduate universities students. The sample was gender-balanced, consisted of 50% women and 50% men, and 98% of the sample ranged from 18 to 25 years of age. Approximately 98% reported having had prior online shopping experience.

We informed our students that the purpose of this study is to examine the usability of KHCF non-profit website for e-donation. Before conducting the study and to familiarise our students with the test procedures, brief navigation instructions were given to explain the procedures of e-donation. Furthermore, we restricted the time for navigation and donation, in average for each session, to 30 min starting from entering the students and familiarising them with the purpose of the session. Later the students were given VISA card and were asked to donate for a humble amount of money, up to $15, to the KHCF. After the donation session ended, we asked each donator to fill out a questionnaire. The first part of the questionnaire, described general information related to respondent’s age and gender categories in addition to their online behaviour in term of internet usage, previous online shopping experiences, participation in community service
program experiences and online donation if experienced before. The second part addressed the participant’s aesthetic opinion of the donation website, level the adequacy of the information provided on the donation website, the sense of credibility and difficulty of the donation process usage, trust, satisfaction and loyalty.

4.4 Construct operationalisation

The participants were informed that this study aims to measure a non-profit website usability for e-donation. The questionnaire contained seven-point Likert-type scales, anchored by 1 = ‘strongly disagree’ and 7 = ‘strongly agree’. The items and the supporting literature for the measurement scales are shown in Table 1. Following the suggestions of previous researchers (Flavian et al., 2006; Selnes, 1993), a single dimension was used to quantify the variables of aesthetics, information quality, credibility, perceived usability, trust, satisfaction and loyalty measured using a multi-item scale.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived aesthetics (PA1-PA11)</td>
<td></td>
</tr>
<tr>
<td>ASTH1: Overall, I am satisfied with the appearance of this website</td>
<td>Lee and Koubek (2010, 2011)</td>
</tr>
<tr>
<td>ASTH2: I feel the design of this website is aesthetic</td>
<td></td>
</tr>
<tr>
<td>ASTH3: I feel the design of this website is pleasant</td>
<td></td>
</tr>
<tr>
<td>ASTH4: I feel the design of this website is clear</td>
<td></td>
</tr>
<tr>
<td>ASTH5: I feel the design of this website is clean</td>
<td></td>
</tr>
<tr>
<td>ASTH6: I feel the design of this website is systematic</td>
<td></td>
</tr>
<tr>
<td>ASTH7: I feel the design of this website is creative</td>
<td></td>
</tr>
<tr>
<td>ASTH8: I feel the design of this website is fascinating</td>
<td></td>
</tr>
<tr>
<td>ASTH9: I feel the design of this website uses special effects</td>
<td></td>
</tr>
<tr>
<td>ASTH10: I feel the design of this website is original</td>
<td></td>
</tr>
<tr>
<td>ASTH11: I feel the design of this website is sophisticated</td>
<td></td>
</tr>
<tr>
<td>Information quality (IQ1–IQ8)</td>
<td></td>
</tr>
<tr>
<td>IQ1: This charity’s website statement is clear in meaning</td>
<td>McKinney et al. (2002)</td>
</tr>
<tr>
<td>IQ2: This charity website statement easy to comprehend</td>
<td></td>
</tr>
<tr>
<td>IQ3: This website’s mission statement easy to read</td>
<td></td>
</tr>
<tr>
<td>IQ4: This charity website provides informative instructions to assist me in making money donation</td>
<td></td>
</tr>
<tr>
<td>IQ5: This charity website provides valuable information to assist me in making money donation</td>
<td></td>
</tr>
<tr>
<td>IQ6: This charity website provides trustworthy information to assist me in making money donation</td>
<td></td>
</tr>
<tr>
<td>IQ7: This charity website provides accurate information to assist me in making money donation</td>
<td></td>
</tr>
<tr>
<td>IQ8: This charity website provides credible information to assist me in making money donation</td>
<td></td>
</tr>
</tbody>
</table>
Table 1  Research construct operationalisation (continued)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility (CRD1–CRD17)</td>
<td></td>
</tr>
<tr>
<td>CRD1: The site lists well-known donors or people who buy from them</td>
<td>Long and Chiagouris (2006)</td>
</tr>
<tr>
<td>CRD2: The site is advertised on the radio, billboards, television, magazines, newspapers or other media</td>
<td></td>
</tr>
<tr>
<td>CRD3: The site has ads that match the topic you are reading about</td>
<td></td>
</tr>
<tr>
<td>CRD4: The site makes it hard to distinguish ads from content</td>
<td></td>
</tr>
<tr>
<td>CRD5: The site is by an organisation that is well respected</td>
<td></td>
</tr>
<tr>
<td>CRD6: The site looks professionally designed</td>
<td></td>
</tr>
<tr>
<td>CRD7: The site is arranged in a way that makes sense to you</td>
<td></td>
</tr>
<tr>
<td>CRD8: The site’s design is appropriate to its subject matter</td>
<td></td>
</tr>
<tr>
<td>CRD9: The site contains content that differs from your opinions</td>
<td></td>
</tr>
<tr>
<td>CRD10: The site takes a long time to download</td>
<td></td>
</tr>
<tr>
<td>CRD11: The site represents a company that is having financial or legal difficulties</td>
<td></td>
</tr>
<tr>
<td>CRD12: The site links to a site you think is not credible</td>
<td></td>
</tr>
<tr>
<td>CRD13: The site is difficult to navigate</td>
<td></td>
</tr>
<tr>
<td>CRD14: The purpose of the site is clear</td>
<td></td>
</tr>
<tr>
<td>CRD15: The site is user friendly</td>
<td></td>
</tr>
<tr>
<td>CRD16: The site is easy to browse for information</td>
<td></td>
</tr>
<tr>
<td>CRD17: The site requires that I provide information about myself</td>
<td></td>
</tr>
<tr>
<td>Perceived usability (USAB1–USAB7)</td>
<td></td>
</tr>
<tr>
<td>USAB1: It will be simple to use this website</td>
<td>Flavian et al. (2006)</td>
</tr>
<tr>
<td>USAB 2: I will be able to effectively complete the tasks and scenarios using this website</td>
<td></td>
</tr>
<tr>
<td>USAB 3: I will be able to complete the tasks and scenarios quickly using this website</td>
<td></td>
</tr>
<tr>
<td>USAB 4: I will be able to efficiently complete the tasks and scenarios using this system</td>
<td></td>
</tr>
<tr>
<td>USAB 5: I feel comfortable using this website</td>
<td></td>
</tr>
<tr>
<td>USAB 6: It will be easy to learn to use this website</td>
<td></td>
</tr>
<tr>
<td>USAB 7: I believe I can become productive quickly using this website</td>
<td></td>
</tr>
<tr>
<td>Trust (TRU):</td>
<td></td>
</tr>
<tr>
<td>Honesty (HON1–HON5)</td>
<td></td>
</tr>
<tr>
<td>HON1: I think that this website usually fulfils the commitments it assumes</td>
<td>Flavian et al. (2006)</td>
</tr>
<tr>
<td>HON2: I think that the information offered by this site is sincere and honest</td>
<td></td>
</tr>
<tr>
<td>HON3: I think I can have confidence in the promises that this website makes</td>
<td></td>
</tr>
<tr>
<td>HON4: This website does not make false statements</td>
<td></td>
</tr>
<tr>
<td>HON5: This website is characterised by the frankness and clarity of the services that it offers to the consumer</td>
<td></td>
</tr>
</tbody>
</table>
### Table 1  
Research construct operationalisation (continued)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trust (TRU)</strong>:</td>
<td></td>
</tr>
<tr>
<td><strong>Benevolence (BEN1–BEN6)</strong></td>
<td></td>
</tr>
<tr>
<td>BEN1: I think that the advice and recommendations given on this website are made in search of mutual benefit</td>
<td>Flavian et al. (2006)</td>
</tr>
<tr>
<td>BEN2: I think that this website is concerned with the present and future interests of its users</td>
<td></td>
</tr>
<tr>
<td>BEN3: I think that this website takes into account the repercussions that their actions could have on the consumer</td>
<td></td>
</tr>
<tr>
<td>BEN4: I think that this website would not do anything intentional that would prejudice the user</td>
<td></td>
</tr>
<tr>
<td>BEN5: I think that the design and commercial offer of this website take into account the desires and needs of its users</td>
<td></td>
</tr>
<tr>
<td>BEN6: I think that this website is receptive to the needs of its users</td>
<td></td>
</tr>
<tr>
<td><strong>Competence (COM1–COM4)</strong></td>
<td></td>
</tr>
<tr>
<td>COM1: I think that this website has the necessary abilities to carry out its work</td>
<td></td>
</tr>
<tr>
<td>COM2: I think that this website has sufficient experience in the marketing of the products and services that it offers</td>
<td></td>
</tr>
<tr>
<td>COM3: I think that this website has the necessary resources to successfully carry out its activities</td>
<td></td>
</tr>
<tr>
<td>COM4: I think that this website knows its users well enough to offer them products and services adapted to their needs</td>
<td></td>
</tr>
<tr>
<td><strong>Satisfaction (SAT1–SAT4)</strong></td>
<td></td>
</tr>
<tr>
<td>SAT1: I think that I made the correct decision to use this website</td>
<td>Flavian et al. (2006)</td>
</tr>
<tr>
<td>SAT2: The experience that I have had with this website has been satisfactory</td>
<td></td>
</tr>
<tr>
<td>SAT3: In general terms, I am satisfied with the way that this website has carried out transactions</td>
<td></td>
</tr>
<tr>
<td>SAT4: In general, I am satisfied with the service I have received from the website</td>
<td></td>
</tr>
<tr>
<td><strong>Loyalty</strong></td>
<td></td>
</tr>
<tr>
<td>LOY1: I will visit this website more frequently than others to donate</td>
<td>Flavian et al. (2006)</td>
</tr>
<tr>
<td>LOY2: This is the website where I will donate</td>
<td></td>
</tr>
<tr>
<td>LOY3: This is my favourite website for donation</td>
<td></td>
</tr>
<tr>
<td>LOY4: Not counting this website, in the last few months I have visited very few sites that offer similar donation</td>
<td></td>
</tr>
<tr>
<td>LOY5: The frequency with which I visit other websites that offer similar services is much less</td>
<td></td>
</tr>
<tr>
<td>LOY6: I don’t usually donate for other websites</td>
<td></td>
</tr>
</tbody>
</table>

The questions in italics were items deleted in the confirmatory factor analysis.

To measure perceived aesthetics (ASTH), we adopted an 11-item scale based on Lee and Koubek’s (2010, 2011) scale. To measure perceived information quality (IQ), we adopted an eight-item scale based on McKinney et al. (2002). We used a modified
version of Long and Chiagouris’s (2006) study (based on; Fogg et al., 2002 and McMurdo, 1998) which was consisted of 17-item scale, to measure credibility (CRD). The measurement of website perceived usability, however, was a little more complex. Although a number of efforts made to quantify usability, most of the instruments have not been submitted to adequate validation (Flavian et al., 2006). Nevertheless, we followed Flavian et al.’s (2006) recommendation to use the website analysis and measurement inventory (WAMMI) scale which is considered the most frequent usability measurement in website design in several well-established firms, such as Compaq, Nokia and Ericsson. Therefore, to measure non-profit website perceived usability (USAB), we used Flavian et al.’s (2006) measure (which based on; Lee and Koubek, 2010, 2011; Roy et al., 2001; Kirakowski et al., 1998; Lee, 2013). For trust (TRU), we used Flavian et al.’s (2006) scale (based on; Doney and Cannon, 1997; Kumar et al., 1995; Roy et al., 2001; Siguaw et al., 1998). We followed the Flavian et al.’s (2006) scale to measure satisfaction (SAT, based on the proposals of Brockman (1998), Janda et al. (2002), Smith and Barclay (1997)). We measured loyalty (LOY) using Flavian et al.’s (2006) scale (based on; Flavian et al., 2001; Rowley and Dawes, 2000; Yoon and Kim, 2000).

4.5 Analysis and results

We examined all the scale items to reflect the hypothesised direction. We used a combination of SPSS 17 and Amos 17. Furthermore, we examined the univariate skewness and kurtosis of the variables and found them to be within acceptable levels (Fornell and Larcker, 1981).

4.6 Measurement models

The analysis started with an examination of the structure and dimensionality of the study constructs using confirmatory factor analysis (CFA) and reliability analysis. After examining the CFA, we deleted seven items from aesthetics construct, four items from information quality construct, 13 items from credibility construct, and three items from usability construct, 10 items from trust, and three items from loyalty because all the deleted items either crossed loaded <0.7 (Fornell and Larcker, 1981). Before estimating the path coefficients of the hypothesised structural model, we proceeded to fit a CFA on all seven latent factors: ASTH, IQ, CRD, USAB, TRU, SAT and LOY. Composite reliability is an indicator of the shared variance among the set of observed variables used as indicators of a latent construct (Fornell and Larcker, 1981). As Table 2 shows, construct reliabilities for all seven latent constructs ranged from ASTH (0.93), IQ (0.90), CRD (0.89), USAB (0.92), SAT (0.87), TRU (0.87) and LOY (0.92) all of which are acceptable (Hair et al., 2006). In addition, the coefficient alpha values were well above the threshold value of 0.7 that Nunnally (1978) recommends. The standardised factor loadings ranged from 0.87 to >0.94 and which were statistically significant at the $\alpha = 0.95$ level. This provided the necessary evidence that all the constructs exhibited convergent validity. CFA model fit deemed to be acceptable on the basis of a battery of fit indices ($\chi^2 = 507.952$, $df = 303$; and $\chi^2/df = 1.676$), comparative fit index [CFI] = 0.932, goodness-of-fit index [GFI] = 0.941, Tucker–Lewis index [TLI] = 0.925, incremental fit index [IFI] = 0.942, and root mean square error of approximation [RMSEA] = 0.041) consistent with Hu and Bentler’s (1999) recommendations.
Investigating antecedents and their consequences of usability

Table 2  Measurement model summary

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Direction</th>
<th>Construct</th>
<th>Standardised estimate</th>
<th>SE</th>
<th>t-value</th>
<th>P</th>
<th>CR</th>
<th>AVE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTH1</td>
<td>← ASTH</td>
<td></td>
<td>0.82</td>
<td>0.93</td>
<td>0.064</td>
<td>11.505</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>ASTH2</td>
<td>← ASTH</td>
<td></td>
<td>0.88</td>
<td>0.064</td>
<td>0.065</td>
<td>12.286</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>ASTH3</td>
<td>← ASTH</td>
<td></td>
<td>0.91</td>
<td>0.064</td>
<td>0.065</td>
<td>10.145</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>ASTH4</td>
<td>← ASTH</td>
<td></td>
<td>0.89</td>
<td>0.063</td>
<td>0.063</td>
<td>10.145</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>IQ1</td>
<td>← INFO</td>
<td></td>
<td>0.92</td>
<td>0.90</td>
<td>0.070</td>
<td>11.412</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>IQ2</td>
<td>← INFO</td>
<td></td>
<td>0.81</td>
<td>0.070</td>
<td>0.070</td>
<td>8.545</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IQ3</td>
<td>← INFO</td>
<td></td>
<td>0.79</td>
<td>0.058</td>
<td>0.058</td>
<td>9.425</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>IQ4</td>
<td>← INFO</td>
<td></td>
<td>0.82</td>
<td>0.074</td>
<td>0.074</td>
<td>7.352</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>CRD1</td>
<td>← CRD</td>
<td></td>
<td>0.75</td>
<td>0.87</td>
<td>0.072</td>
<td>7.914</td>
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</tr>
<tr>
<td>CRD2</td>
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<td>0.81</td>
<td>0.072</td>
<td>0.072</td>
<td>8.767</td>
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</tr>
<tr>
<td>CRD3</td>
<td>← CRD</td>
<td></td>
<td>0.88</td>
<td>0.067</td>
<td>0.067</td>
<td>9.258</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>CRD4</td>
<td>← CRD</td>
<td></td>
<td>0.85</td>
<td>0.062</td>
<td>0.062</td>
<td>8.125</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>USAB1</td>
<td>← USAB</td>
<td></td>
<td>0.87</td>
<td>0.92</td>
<td>0.096</td>
<td>12.457</td>
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</tr>
<tr>
<td>USAB2</td>
<td>← USAB</td>
<td></td>
<td>0.88</td>
<td>0.084</td>
<td>0.084</td>
<td>10.235</td>
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<tr>
<td>USAB3</td>
<td>← USAB</td>
<td></td>
<td>0.85</td>
<td>0.090</td>
<td>0.090</td>
<td>11.827</td>
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<td>0.90</td>
<td>0.090</td>
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</tr>
<tr>
<td>TRU1</td>
<td>← TRU</td>
<td></td>
<td>0.77</td>
<td>0.77</td>
<td>0.054</td>
<td>9.125</td>
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</tr>
<tr>
<td>TRU2</td>
<td>← TRU</td>
<td></td>
<td>0.81</td>
<td>0.77</td>
<td>0.071</td>
<td>8.235</td>
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<tr>
<td>TRU3</td>
<td>← TRU</td>
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<td>0.77</td>
<td>0.76</td>
<td>0.076</td>
<td>9.162</td>
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</tr>
<tr>
<td>TRU4</td>
<td>← TRU</td>
<td></td>
<td>0.82</td>
<td>0.062</td>
<td>0.062</td>
<td>7.352</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>SAT1</td>
<td>← SAT</td>
<td></td>
<td>0.75</td>
<td>0.87</td>
<td>0.045</td>
<td>7.254</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>SAT2</td>
<td>← SAT</td>
<td></td>
<td>0.78</td>
<td>0.086</td>
<td>0.086</td>
<td>10.258</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>SAT3</td>
<td>← SAT</td>
<td></td>
<td>0.82</td>
<td>0.068</td>
<td>0.068</td>
<td>8.125</td>
<td>***</td>
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</tr>
<tr>
<td>SAT4</td>
<td>← SAT</td>
<td></td>
<td>0.83</td>
<td>0.069</td>
<td>0.069</td>
<td>10.425</td>
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</tr>
<tr>
<td>LOY1</td>
<td>← LOY</td>
<td></td>
<td>0.90</td>
<td>0.92</td>
<td>0.072</td>
<td>9.254</td>
<td>***</td>
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</tr>
<tr>
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<td>0.84</td>
<td>0.072</td>
<td>0.072</td>
<td>9.254</td>
<td>***</td>
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</tr>
<tr>
<td>LOY3</td>
<td>← LOY</td>
<td></td>
<td>0.87</td>
<td>0.069</td>
<td>0.069</td>
<td>10.425</td>
<td>***</td>
<td></td>
</tr>
</tbody>
</table>

Significant at ***p < 0.001 (two-tailed test).

We tested discriminant validity depending on the AVE values, which should be within the cut-off point of 50%. The discriminant validity is established, first, by the absence of significant cross-loadings that are not represented by the measurement model (i.e. congeneric measures). Secondly, we compared the shared variance among the constructs with AVE from each construct (Anderson and Gerbing, 1988; Voss et al., 2003). The square roots of the average variance extracted by each construct exceed the correlation between them (Table 3), demonstrating discriminant validity.
Table 3  Correlation coefficients, and discriminant validity

<table>
<thead>
<tr>
<th>Model Constructs</th>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1. ASTH</td>
<td></td>
</tr>
<tr>
<td>2. IQ</td>
<td>0.24</td>
</tr>
<tr>
<td>3. CRD</td>
<td>0.31</td>
</tr>
<tr>
<td>4. USAB</td>
<td>0.06</td>
</tr>
<tr>
<td>5. TRU</td>
<td>0.11</td>
</tr>
<tr>
<td>6. SAT</td>
<td>0.25</td>
</tr>
<tr>
<td>7. LOY</td>
<td>0.25</td>
</tr>
</tbody>
</table>

The figures under the diagonal are the Pearson (R) correlations between the variables. Diagonal elements are square roots of average variance extracted.

4.7 The structural model

The adequacy of the hypotheses was assessed by using CFI, root mean square residual (RMR), GFI and RMSEA to test the overall goodness of fit of the proposed conceptual model. The results of structural equation modelling obtained for the proposed conceptual model revealed a chi-square of 438.746 (df = 148), CFI of 0.901, RMR of 0.053, GFI of 0.90 and RMSEA of 0.079, indicating a good model fit (Byrne, 2001; Hair et al., 2006). To test the structural model, we fit measures indicated acceptable agreement with the covariance in the data ($\chi^2 = 880.612$, df = 316, $\chi^2$/df = 2.787; CFI = 0.93; GFI = 0.92; AGFI = 0.91; TLI = 0.91; IFI = 0.90; and RMSEA = 0.055). The results of the hypotheses testing support all postulated paths for H1–H3. We found that ASTH was positively associated with USAB ($\beta = 0.38$, $P < 0.001$) and IQ was positively associated with USAB ($\beta = 0.66$, $P < 0.001$). Furthermore, we found that CRD positively impact USAB ($\beta = 0.20$, $P < 0.01$) with $R^2 = 60$. Furthermore, we found that USAB was positively associated with SAT ($\beta = 0.60$, $P < 0.001$, with $R^2 = 0.27$) and TRU ($\beta = 0.45$, $P < 0.001$) and that SAT positively impact TRU ($\beta = 0.40$, $P < 0.001$, with $R^2 = 0.30$), and that SAT positively impact LOY ($\beta = 0.37$, $P < 0.001$) and TRU positively impact LOY ($\beta = 0.30$, $P < 0.001$, with $R^2 = 45$).

5 Discussion

This research aims to investigate the main antecedents of perceived non-profit website usability of e-donation and its consequences. The results of this research supported the hypotheses (H1–H3) that perceived aesthetics, information quality and credibility have significant impacts on perceived usability of e-donation website. According to the path coefficient analyses, we found that information quality was proven to be the most significant factor predicting usability of e-donation website with a coefficient value of 0.66. That means users how find a high level of information about NPO often see the website usable. Therefore, NPO website should be designed to introduce different, relevant, sufficient and accurate information about their programs. This result has been confirmed within previous literature. For instance, Sharma and Lijuan’s (2015) study
Investigating antecedents and their consequences of usability

posited the positive association between information quality and e-commerce website usability. Algharabat and Shatnawi (2014) posited that information quality reflected by ease of use has a direct impact on website usability. Therefore, when online donors find a non-profit website hard to use, they leave the site without accomplishing their objectives. Therefore, a non-profit website should be informative by providing detailed and specific information on their activities, patients’ cases, achievements and other relevant topics.

We found that, according to the path coefficient analyses, aesthetics proved to be the second most significant factor predicting usability of non-profit e-donation website with a coefficient value of 0.38, meaning that the connection between non-profit website aesthetics and non-profit website usability is significant. Therefore, including pictures, animation, video clips and background music on the non-profit website often makes it alive and more attractive to visitors. For instance, pictures and graphic images of patients, events and accomplishments are good drivers of the usability of e-donations website, because donors like to see what they are donating for. This result comes in accordance with Hoffman and Novak (1996) and Agarwal and Karahanna (2000) who asserted that using multimedia tools, richness and interactivity in websites help to engage users with the website. Moreover, Agarwal and Venkatesh (2002) found that colour and font are important factors predicating website usability. We find that credibility has the third most important factor for predicting usability of e-donation website with a coefficient value of 0.20. This result confirms Long and Chiagouris’s (2006) subjective interpretation items. In other words, users’ feelings of having credible website enhance the usability of the website. Therefore, NPO should design the donation website properly and include each and every detail which might help users to build more confident in the website.

The relationship between website usability, trust and satisfaction was improved in this research (H4a–H4b). For instance, we found that path coefficient between perceived usability and satisfaction is 0.60 which explains the important relationship between perceived usability and satisfaction. In other words, donors who find a non-profit website usable they often feel satisfied about it. This type of attitudinal satisfaction makes donors feel positively about the NPO. The relationship between website usability and trust matches our expectations with path coefficient of 0.45. This means that a usable non-profit website has a positive impact on users’ trust. Therefore, a usable non-profit website enhances users trust at the website. Therefore, a NPO must focus on usability of the website because any problem which could be associated with payment, for instance, often increase feelings of distrust and discourage future transactions and thus may influence perceived competence (trust) significantly. Furthermore, a usable non-profit website often enhances its honesty by fulfilling promises and be sincere. A usable non-profit website also enhances its benevolence which is related to the belief that NPO is interested in the wellbeing of the donors and patients. Furthermore, we found that satisfaction has a positive impact on trust with coefficient value of 0.40; this result comes in accordance with Flavian et al. (2006). Therefore, it would appear that online donors who have a satisfactory experience with NPO website might form a high level of trust. Thus, NPOs should design their websites to enhance donors’ satisfaction.

The results of this research supported the hypotheses (H6–H7) that trust has a significant impact on donors’ loyalty towards non-profit website with $R^2$ value of 0.45. Meaning that 0.45% of loyalty variance is explained by trust and satisfaction. According to the path coefficient analyses, we find that the impact of satisfaction on loyalty has the highest level 0.37, thus a satisfied donor has more ability to spread positive attitudes and behaviours among other donors to donate more for NPO. Furthermore, we found a
positive relationship between trust and loyalty with path coefficient of 0.30 and it comes as the second most significant factor predicting both donors’ attitudes and behaviours among donors for non-profit websites. Therefore, non-profits websites who design their websites properly to reflect trust and satisfaction dimensions are expected to enhance donors’ loyalty. This result comes in accordance with previous studies, which assert the importance of satisfaction and trust on users’ loyalty (Flavian et al., 2006).

5.1 Implications for theory

To the best of the authors’ knowledge, this study makes the following important contributions to the extant literature in online non-profit sector. First, previous research has not empirically tested the impact of perceived aesthetics, information quality and credibility on the usability of e-donation website which in turn impact satisfaction and trust which impact loyalty. Therefore, this study introduced the above sequence to test its implication within a non-profit context. Secondly, the methodology of this research considered as a main contribution in which the authors employed student sample to test their effect on NPO loyalty. Thirdly, we provided a contribution to the IS and marketing fields by combining different theories for non-profit website organisation.

5.2 Implications for practice

Results from this paper provide practitioners and marketing managers with information on the proper design of NPO and its implementations in their websites. The antecedents of usability of non-profit website shed a light on the main aspects which non-profit website should focus on. Therefore, non-profit website who intends to build loyalty (attitudinal and behavioural) and to attract the attention of more donors via websites should first design the website properly focusing on emotional, functional and credibility information to increase donors’ belief in the usability of a non-profit website. Therefore, non-profit website should be developed and designed to reflect

- aesthetics
- information quality
- credibility.

Non-profit website should focus on the importance of the consequences of the perceived credibility, namely, satisfaction and trust. In particular, the relationship between non-profit website usability and donors’ satisfaction as well as the relationship between non-profit website usability and donors’ trust give more insights for marketing managers. For instance, donors who believe that non-profit website is usable, as result of navigating the website, tend to be more satisfied about the website. Therefore, non-profit website managers should understand the main elements which create donors’ satisfaction. This satisfaction might differ from country to another. Thus, managers should continuously conduct customer satisfaction surveys in order to recommend new and novel designs for the non-profit websites to increase donors’ satisfaction with the websites. Furthermore, we recommend non-profit managers to monitor loyalty elements (attitudinal and behavioural) of their websites.
5.3 Limitations and future research

We admit that there are several limitations to this study. First, our sample consists of students which might not be the proper sample of generalising our results. However, we argue that students represent the shoppers of tomorrow, are computer-literate, have few problems using new technology, and are likely consumers of electronic goods (Algharabat and Dennis, 2010). Secondly, this study only focused on the viewpoints of Jordanian, Middle East users. This means that the investigations of the relationship among the study variables are solely based on the perspectives of Jordanian users. Thus, results may have been different from the perspective of various western context backgrounds. We recommend future researchers to investigate the impact of brand engagement and customer brand engagement on credibility of the non-profit websites. Furthermore, we recommend future research to test the impact of social media marketing on the usability of their social websites (Alalwan et al., 2016, 2017).

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Investigating antecedents and their consequences of usability


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Investigating antecedents and their consequences of usability


**Websites**