

# IS INCOME CORRELATED TO ASSESSMENT OF CREDIBILITY DIMENSIONS OF COMMERCIAL WEBSITES?

**Oana Țugulea, Claudia Stoian (Bobâlcă)**

*Department of Management, Marketing and Business Administration, Faculty of Economics and Business Administration, University "Alexandru Ioan Cuza" of Iași, Romania*

*ciobanu.oana@uaic.ro*

*iuliana.bobalca@uaic.ro*

**Abstract:** *The purpose of this research is to understand if young Internet users' income has any connection with their manner to appreciate credibility dimensions of online acquisition websites. The hypotheses are: (H1) - Among the credibility dimensions identified there will be Ease of use, Framing Adverts, Real World Feel, Expertise; (H2) - The income is correlated with the dimensions of credibility of online acquisition websites. (H3) - Certain credibility dimensions are predictors of the income level of the young Internet user. The objectives of this research are: (1) to identify the dimensions of credibility of online acquisition websites;(2) to identify potential correlations between income levels of young Internet users and dimensions of credibility of online acquisition websites;(3) to understand if certain credibility dimension of online acquisition websites may be used as predictors of the income level of young Internet users. The research method was a quantitative survey based on a questionnaire and the sample consisted of 276 young Internet shoppers. Seven credibility dimensions were identified in this research: Ease of Use/Professionalism, Transparency, Expertise, Real World Feel, Product Support, Framing Adverts and Online Order. The income level has connection with the manner Internet users appreciate a part of credibility dimensions of online acquisition websites. The dimensions correlated with the income level are: Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts and Online Order. Expertise and Product Support are not correlated with the income level of the young Internet user. Ease of Use/Professionalism and Transparency may be used as predictors of income level of young Internet users. This research is original because it investigates the correlation of income levels and the scores of credibility dimensions of online acquisition websites. There are studies investigating the connection between the income level of participants and the rating of the dimensions of credibility. The novelty brought by this research is that dimensions are computed as factor score in SPSS. The investigated correlations involved the factor scores and the income levels. The results of this research are useful to managers, when planning to build a credible website for various income level targets.*

**Keywords:** *Internet; credibility; online shopping; reasons to buy; reasons not to buy; income.*

**JEL classification:** *M31; M39.*

## 1. Introduction

Credibility has been widely studied by researchers in social sciences (Țugulea, 2014). The literature in business administration is rich in studies on this topic. Credibility was studied as a general concept, for any type of source or as a concept applied for specific sources such as types of media, personal sales, marketing messages, etc.

The construct of credibility applied in the online context received a great attention from researches all over the world. The concept was studied for websites, in general, and for specific types of websites, such as personal web pages, online newspapers, blogs, online communities, commercial websites, health websites, finance websites, etc. Some researchers (Fogg et. al., 2001) analysed the dimensions of credibility of websites in more depths, depending on sex, educational level and income of participant. The purpose of this

research is to understand if young Internet users' income has any connection with their manner to appreciate credibility dimensions of online acquisition websites. The hypotheses are: (H1): Among the credibility dimensions identified there will be Ease of use, Framing Adverts, Real World Feel and Expertise; (H2): The income is correlated with the dimensions of credibility of online acquisition websites; (H3): Certain credibility dimensions are predictors of the income level of the young Internet user. The objectives of this research are: (1) to identify the dimensions of credibility of online acquisition websites; (2) to identify potential correlations between income levels of young Internet users and dimensions of credibility of online acquisition websites; (3) to understand if certain credibility dimension of online acquisition websites may be used as predictors of the income level of young Internet users.

## 2. Literature review

The concept of credibility has a long history in the human communication process (Ceobanu and Anton, 2009). A definition of the concept of "credible information" that is often used in the literature is the information that can be trusted (Fong and Tseng, 1999). In his research, Eisend (2006) examined various other credibility studies with the purpose to deliver a general concept of credibility of communication sources in marketing. His results deliver three dimensions of credibility: (1) inclination toward truth („will tell the truth”), (2) potential of truth („knows the truth”) and (3) presentation of truth (appears to tell the truth”). The online environment received great attention from credibility researchers in the past years. For example, Rieh and Danielson (2007) made a distinction of assessment levels on web credibility: assessment of Web as a type of media, assessment of websites as sources of information and assessment of information from the Web. Different types of web pages were studied by researchers from this perspective. Johnson and Kay (2004) state that blogs are perceived to be more credible than traditional sources of information, as information is presented in more details. The credibility of eWOM (online communities such as forums) is influenced by the strengths of reasoning, source credibility and validation of the receptor's opinion (Cheung et. al., 2009). The credibility of online reviews in tourism was analysed by Ayeh et. al. (2013), using a construct with the dimensions of trust and expertise in order to check the model's relevance. In their research, Chung et. al. (2010) underline that online independent newspapers represent the least credible type of online newspapers. Web credibility researchers studied the construct of credibility in various contexts. These studies delivered dimensions of credibility. For example, Morrison (2005) analysed the credibility of an online source using eight dimensions: (1) sufficiency, (2) decision, (3) liked, (4) confident, (5) complete, (6) trust, (7) bias and (8) accurate. Fogg et. al. (2001) delivered seven dimensions of the credibility of a web page: (1) real world feel, (2) ease of use, (3) expertise, (4) trustworthiness, (5) tailoring, (6) commercial implications and (7) amateurism. Web credibility was also studied on comparison between different demographic data. For example, Fogg et. al. (2001) study also concluded that men are more critical than women when evaluating the credibility dimensions of websites. Flanagin and Metzger (2003) studied the comparison of credibility of personal web pages from the same perspective: men and women. Fogg et. al. (2001) also studied differences in credibility perception of websites from the educational level and income perspective. In his research, differences from the income point of view are identified for one dimension only. Studies on commercial type of websites were conducted as well. In the research of Ciobanu (2015), commercial websites are split into two categories of websites: (1) commercial presentation websites and (2) online acquisition websites. Factor analysis was used in order to determine the dimensions of credibility of these two types of commercial websites.

### 3. Purpose and hypotheses

The purpose of this research is to understand if income has any connection with the manner that young Internet users appreciate credibility dimensions of online acquisition websites. The hypotheses are:

*H1: Among the credibility dimensions identified there will be Ease of use, Framing Adverts, Real World Feel and Expertise.* These dimensions were identified in previous studies on dimensions of online acquisition websites, on different samples (Ciobanu, 2011; Ciobanu, 2015). The dimension Real World Feel, in particular, was also identified by Fogg et. al. (2001) in his research on credibility dimension of websites, in general.

*H2: The income is correlated with the dimensions of credibility of online acquisition websites.* This hypothesis relies on the fact that users with higher income levels spend less time on acquisitions, in general. Most probably, they use the Internet more often to make online purchases. This aspect makes the online users with higher income levels be more experienced and assess credibility dimensions in a different manner comparing to young users with smaller income levels.

*H3: Certain credibility dimensions are predictors of the income level of the young Internet user.* This hypothesis relies on the previous hypothesis.

The objectives of this research are: (1) to identify the dimensions of credibility of online acquisition websites; (2) to identify potential correlations between income levels of young Internet users and dimensions of credibility of online acquisition websites; (3) to understand if certain credibility dimension of online acquisition websites may be used as predictors of the income level of young Internet users.

### 4. Methodology

This research relies on a previous research (Ciobanu, 2014). The previous research investigated the construct of credibility of commercial websites, split into two categories of websites: presentation and online acquisitions websites. This research only investigates online acquisition websites category. The previous research initially involved 76 items. The items represented affirmation on aspect about credibility of online acquisition of websites. Each affirmation had a 7 point credibility scale, from 1 (criterion is not accomplished) to 7 (criterion is very accomplished). After successive factor analyses, 44 items were removed. 32 items remained in the analysis. Data was collected using a quantitative survey based on a reduced instrument of the 32 items (Ciobanu-Tugulea, 2015).

### 5. Population and sample

Young Internet shoppers represent the investigated population. Participants in this research were included with a condition: to have made at least one online acquisition in the past year. The sample consisted of 276 students from Faculty of Economics and Business Administration, "Alexandru Ioan-Cuza" University of Iasi, Romania. This is a convenience sample, with randomly selected groups of students, from various majors of the faculty, bachelor and master degree students.

Although the consistency of the sample excluded online shoppers that are not students, the sample is a valid one for the purpose of this research, as students are very familiar with Internet activity, online shopping included (Oakes, 1972; James and Sonner, 2001, Miyazaki and Fernandez, 2001, Sexton et. al., 2002; Kwak et. al., 2002). Ethical aspects of a social science research were approached. Participants were asked for their verbal consent to participate in the study, after being informed on the purpose of this research. Participating at this study was not correlated to any evaluation criteria. There was used no kind of force to convince participants to fill in the questionnaire. All questionnaires were anonymous.

As for income levels distribution (in Ron), 26.8% of the students have an income less than 300 Ron while 25% of the students have an income higher than 900 Ron. 18,8% of the respondents have the level of income between 300 and 500 Ron, 14,1% of them have the income level between 501 and 700 Ron while 10,5% have the income level between 701 and 900 Ron

## 6. Results

*Objective 1: identifying the dimensions of credibility of online acquisition websites.*

The exploratory factor analysis was conducted, Principal Axis Factoring method and Promax rotation in SPSS. There are many opinions in the literature regarding the sample size for a factor analysis procedure. For example, according to Hutcheson and Sofroniou (1999), the number of cases should not be less than 150. Hatcher (1994) states that the number of cases should be five times larger than the number of variables included in the analysis. There are 32 items included in this research and 276 cases. This number of cases exceeds Hutcheson and Sofroniou (1999) and Hatcher (1994) recommendation (32 items x 5 = 160 cases minimum). In the first run, two items that loaded < 0.3 in the Factor Matrix were eliminated. Weak factor loads are below 0.3, moderate factor loads are between 0.3 and 0.6 and strong factor loads are over 0.6 (DeCoster, 2004). In the second run of the analysis, all items loaded > 0.3 in the Factor matrix. Four items loaded similar in the Pattern Matrix and they were eliminated from the analysis. The value of the KMO and Bartlett's Test is 0.830 (> 0.6), sig. < 0.05. The factor analysis is valid. The dimensions of credibility of online acquisition websites are synthetically presented in the Table 1. The dimensions presented in Table 1 explain approximate 50% of the total variance. According to Malhotra (1996), it is recommended that factors explain at least 60% of the total variance. As the purpose of this analysis is to explain the variance by a small number of factors, the minimum variance accepted may be 50%. The first dimension, *Ease of Use/Professionalism*, explains 21.16% of the total variance. The second dimension, *Transparency*, explains 12.16 % of the total variance. The third dimension, *Expertise*, explains 4.16 % of the total variance. The fourth dimension, *Real World Feel*, explains 3.42 % of the total variance. The dimension, *Product Support*, explains 3.37 % of the total variance. The dimension, *Framing Adverts*, explains 2.88 % of the total variance. The last dimension, *Online Order*, explains 2.31 % of the total variance.

*Objective 2: identifying potential correlations between income levels of young Internet users and dimensions of credibility of online acquisition websites.*

The dimension *Ease of Use/Professionalism* is correlated with income levels. The value of Pearson coefficient is -0.194, with sig = 0.003. The correlation is negative, but the intensity of correlation is very low (< 0.3). The higher is the level of income, the least is the value of the dimension's score computed by SPSS.

The dimension *Transparency* is correlated with income levels. The value of Pearson coefficient is 0.139, with sig = 0.036. The correlation is positive, but the intensity of correlation is very low (< 0.3). The higher is the level of income, the higher is the value of the dimension's score computed by SPSS.

The dimension *Expertise* is not correlated with income levels (sig > 0.05). The value of Pearson coefficient is -0.033, with sig = 0.623.

The dimension *Real World Feel* is correlated with income levels. The value of Pearson coefficient is -0.157, with sig = 0.018.

The correlation is negative, but the intensity of correlation is very low (< 0.3). The higher is the level of income, the lower is the value of the dimension's score computed by SPSS.

The dimension *Product Support* is not correlated with income levels (sig > 0.05). The value of Pearson coefficient is 0.035, with sig = 0.597.

The dimension *Framing Adverts* is correlated with income levels. The value of Pearson coefficient is 0.141, with sig = 0.033.

The correlation is negative, but the intensity of correlation is very low (< 0.3). The higher is the level of income, the lower is the value of the dimension's score computed by SPSS.

The dimension *Online Order* is correlated with income levels. The value of Pearson coefficient is 0.153, with sig = 0.021. The correlation is negative, but the intensity of correlation is very low (< 0.3). The higher is the lever of income; the lower is the value of the dimension's score computed by SPSS.

Except for *Expertise* and *Product Support*, all factors are correlated with the income levels. The correlations are both negative and positive, for various situations. Yet, the Pearson Coefficient for each situation does not exceed 0.3. This means the correlations are not intensive.

**Table 1:** Dimensions resulted from the factor analysis procedure

<b>Dimension</b>	<b>Items</b>
<b>Ease of use/ Professionalism</b>	The site loads rapidly
	All the links posted on the site are functional
	The site is easy to navigate
	The site presents no access errors
	The site makes possible to search information posted in the past
	Products are attentively presented (nice graphics, touched up photos)
<b>Transparency</b>	The site offers details about the manufacturing process and about the products
	The company is the producer of the products promoted by the site
	The site posts links to competitors' sites
	The site offers the names and e-mails of the authors of the articles included in the page
	The presentation of the products also underlines weaknesses/secondary effects of their use
	The company answers fast to my customer support questions
<b>Expertise</b>	The company is a prestigious/respected/serious one
	The company has experience in the commercial field
	The site makes aggressive advertising (such as spam, many pop-up windows, etc.)
<b>Real World Feel</b>	The site offers a phone number for contact.
	The site offers an e-mail address for contact.
<b>Product Support</b>	The site promotes products with services included
	The site promotes products that have warranty
	The site or the products it promotes are promoted by other types of media as well
	Delivery is free
<b>Framing Adverts</b>	The site structure clearly distinguishes the presented information by the adverts
	The site contains adverts that fit the presented information
<b>Online Order</b>	The structure of the site does not insist on ordering
	The site has a comfortable order system
	The company frequently updates data on the site

*Objective 3: understanding if certain credibility dimension of online acquisition websites may be used as predictors of the income level of young Internet users.*

Linear regression was conducted, Enter method. The independent dimensions inserted in the model were the five dimensions correlated with the income level: *Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts, Online Order* (Table 2).

**Table 2:** Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
REGR factor score for analysis 1		B	Std. Error	Beta		
1	(Constant)	2,909	,102		28,510	,000
	REGR factor score 1	-,310	,150	-,180	-2,072	,039
	REGR factor score 2	,309	,128	,179	2,406	,017
	REGR factor score 4	-,064	,126	-,040	-,513	,608
	REGR factor score 6	-,155	,148	-,086	-1,049	,295
	REGR factor score 7	,078	,161	,043	,482	,630

*a Dependent Variable: Income level*

Only two factors are important to predict the income level: *Ease of Use/Professionalism* and *Transparency*. For these two predictors, sig. < 0.05 and t value > +2 or <-2.

## 7. Conclusions

This research has the purpose to understand if income had any connection with the manner that young Internet users appreciate credibility dimensions of online acquisition websites. As a general conclusion, the income level has connection with the manner Internet users appreciate a part of credibility dimensions of online acquisition websites.

### *Hypotheses confirmation and disconfirmation*

H1 hypothesis was validated. The dimensions identified in this research are: *Ease of Use/Professionalism, Transparency, Expertise, Real World Feel, Product Support, Framing Adverts, Online Order*. H2 hypothesis was partially validated. Only five out of seven dimensions are correlated with the income level: *Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts, Online Order*. Expertise and Product Support are aspects assessed by young Internet users in a similar manner, from the income point of view. H3 hypothesis was also partially validated. Only two dimensions may be used as predictors of income level of young Internet users: *Ease of Use/Professionalism* and *Transparency*.

*Research implications.* This research is original because it investigates the correlation of income levels and the scores of credibility dimensions of online acquisition websites. There are studies investigating the connection between the income level of participants and the rating of the dimensions of credibility. The novelty brought by this research is that dimensions are computed as factor score in SPSS. The investigated correlations involved the factor scores and the income levels.

*Managerial implications.* The results of this research are useful to managers, when planning to build a credible website for various income level targets. Aspects composing dimensions of *Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts* and

Online Order should be carefully considered for various types on income level targets. Managers should test various site designs on various income levels from the perspective of the dimensions listed above.

*Limitations of the research.* This sample is a convenience one. Students from the Faculty of Economics and Business Administration, "Alexandru Ioan Cuza" University of Iași, Romania, were included only. The generalisation of the findings of this research may be affected by the fact that young Internet users, that are not students, and students from other faculties and universities, were not included in the sample. It is well known that students are very familiar with the Internet. This makes the limitation acceptable for the research.

*Future research.* Although there are five factors correlated with the income level - Ease of Use/Professionalism, Transparency, Real World Feel, Framing Adverts, Online Order – only two dimensions may be used as predictors of income level of young Internet users: Ease of Use/Professionalism and Transparency. The possible explanation may be correlated with the experience in online shopping. This study leads to a new hypothesis: the higher the income level is, the more experienced an Internet user is in assessing Ease of Use/Professionalism and Transparency of an online acquisition website.

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