Factors associated with intention to use online surveying

DINO PAVLIĆ, MARIO JADRIĆ, MAJA ĆUKUŠIĆ
Faculty of Economics
University of Split
Cvite Fiskovica 5, Split
CROATIA
{dino.pavlic; mario.jadric; maja.cukusic}@efst.hr

ABSTRACT - Researchers face a number of challenges while provisioning for successful research related to technological and methodological aspects of online surveying tools. In this paper we consider factors that can influence and lead to successful use of online surveys. In order to determine the extent at which these factors are associated with the intention of using online surveys, the research model was tested. Data was collected by using online survey tool from 45 business organizations that use online research as part of their regular marketing activities, as well as 322 undergraduate students enrolled in business related courses that use online survey tools for preparation of their final papers. In line with the relevant findings related to key influencers, regression analysis reveals that subjective norms and perceived usefulness are related to intention to use online surveying for both groups of respondents.

Keywords: - online survey, web, students, business organisations, subjective norms, perceived usefulness

1 Introduction

Online surveys are becoming more widespread and used both in scientific and educational research, as well as for business purposes. Although the web provides multiple advantages compared to the traditional research approach, there are still number of methodological challenges to overcome. Expansion of the internet has affected all aspects of society including research activities. Web-based research surveys are particularly suitable when the information is required urgently. The reason for this is the ability to access a large number of Internet users almost instantly, regardless of their geographical location and the software platform used. Because of these reasons as well as multiple benefits, numerous studies both in academic as well as business purposes are conducted online. During the nineties, there has been a significant increase in usage of internet and computer-mediated communication [41]. Increase in this type of communication led to the number of primary researches conducted via viral communications, online links, and many other aspects of computer-mediated communication and interaction [28]. As a logical result of increased population present on the web, there was an increased use of online surveys as well [4].

Kaye and Johnson [21] identified over 2.000 researches conducted via web in over 59 thematic areas. Rapid expansion of the online survey is not surprising keeping in mind the numerous benefits that such research provides. Some of the major benefits include reducing the time and cost of the research and avoiding mistakes that often occur when entering or editing data [25] [5]. Online surveys are in significantly more favourable position when compared to traditional survey methods due to [36] [40] [37]: design, flexibility, geographic reach, anonymity and minimal chance of error. Besides these, Archer [5] has identified the following elements as the underlying reasons of using the web as a channel for conducting research surveys: saving time and money, the opportunity to explore geographically dislocated objects, simple reminders in case of non-completion of the questionnaire, simple questionnaire manipulation and editing, getting results in real time, the ability of data processing without converting the results into an electronic form, usage of drop-down menus with multiple choice and reduced possibility of errors.

When considering the disadvantages of online surveys, Walters [39] and Gesell et al. [13] point out the following: (i) requires knowledge of computer use, (ii) the routine work and simultaneously performing multiple tasks while using the computer can divert focus from completing the survey, and (iii) the quality of the collected data can be compromised if the respondents felt that their

privacy when completing the online questionnaire was violated. Although online research is an easier solution, it must be used with certain precautions. Population selection is currently one of the biggest challenges within online surveys. Except for the Internet access, it is necessary to determine the skills to use computers and the Internet by the selected population. Some of the specific problems are manifested in incompatibility when using a different web browser [10] or even bad questionnaire formatting [38] that can potentially pose a problem when answering the questionnaire.

The academic community is highly interested in online surveys, and the proportion of online surveys conducted within the academic community in relation to the total surveys conducted over time is increasing dramatically. Accordingly, the number of scientific papers about online research is increasing. Most of the papers focus on the comparison of online surveys with traditional methods [32], the percentage of online surveys successfully completed [33] and the quality of responses [12].

On the other hand, the main purpose of market research in business organisations is to collect valid and reliable information to assist in decision-making processes, planning activities, and business performance controlling. The need to introduce new techniques and replace the traditional methods was acknowledged by Craig and Douglas [8]. They have suggested that the market researchers and marketing professionals will have to expand their knowledge in order to be able to design, implement and interpret online research of the 21st century. According to Roster et al. [32], online research are particularly significant in the internal evaluation such as interviewing personnel or evaluating social satisfaction, as a part of panel research but also when accessing a precise target population.

This paper presents a model for accepting the application of online surveys for both students and business organizations. The model presented in the second part of the paper significantly relies on the basic model of the theory of planned behaviour, slightly modified by Chuang et al. [7], as well as on a model of acceptance of mobile marketing identified in the paper by Pavlić et al. [30]. Third part of the paper brings forth the results of the empirical research while the fourth part discusses the results and concludes the paper.

2 Research background and hypotheses

Concepts that affect human behaviour such as social attitude or personal beliefs play a significant role in predicting and explaining human behaviour [1]. The theory of planned behaviour was created out of frustration with the failure of traditional methods of exploring human behaviour. Most of these traditional methods used to find numerous weak correlations between the measures or behavioural indicators and actual actions or human actions. The theory of planned behaviour was developed by Fishbein and Ajzen [11]. The purpose of their theory was to explain the causes of conscious behaviour. Behaviours that are excluded from this model are spontaneous, impulsive, reckless behaviours or behaviours out of habit or fear etc. [22]. The reason for the exclusion of these behaviours is that they are not voluntary or perhaps because persons may not be fully aware of such behaviour. The theory of planned behaviour does not consider activities that may require special skills, opportunities, resources, or cooperation with others as well [23]. The reason for this is that a person can be prevented from taking certain actions not because of his personal will, but because of a lack of skills, resources, or similar.

Given that in this study a modified version of the theory of planned behaviour was used, theoretical constructs used as the basis of a hypothetical model of this paper are explained below in detail. They highly rely on the basic model of the theory of planned behaviour. Using the mentioned theoretical foundations, a hypothetical research model was formed. The model (Figure 1) assumes that subjective norms, normative beliefs and motivational factors are positively related to perceived usefulness, while the perception of usefulness is positively related with the intention to use online surveys. Also, the assumption is that perceived risk is negatively associated with the intention to use online surveys. The hypotheses are set for two different samples - students and business organizations. The developed questionnaire was contextualised for both groups.

Solid lines in Figure 1 represent the hypothesized relations based on the discussed theoretical background, while dashed lines represent the relations inspected hereinafter. The two-way arrows illustrate correlations between the variables. Therefore, they partly represent the limitations of the research methodology of this paper that is based on correlation design.

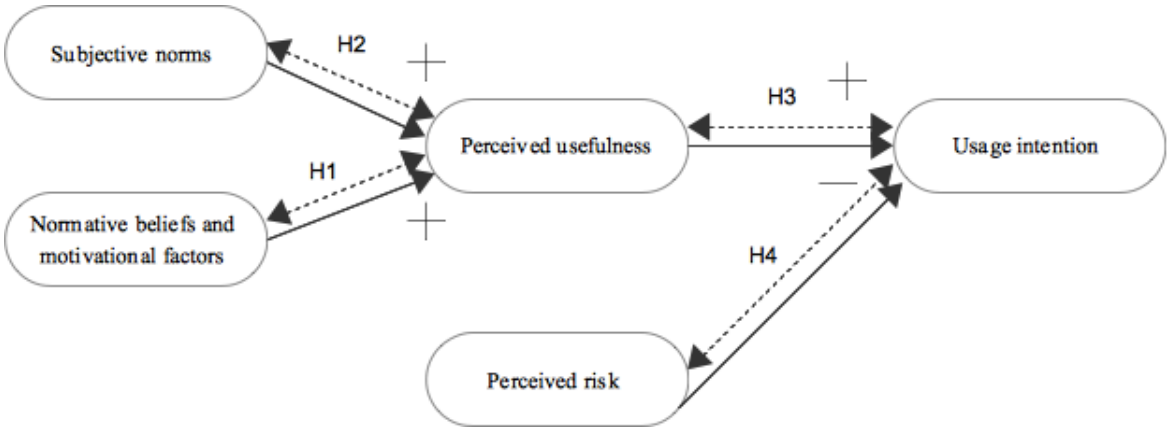

Fig.1. The research model

2.1 Normative beliefs and motivational factors

Normative beliefs reflect customer perceptions of what most people who are important for the user think he/she should or should not do in relation to the observed subject [3]. Relevant individuals have a significant impact on the user, and they encourage or prevent the execution of certain actions or manifesting certain behaviour [31]. Normative belief is the user perception of the specific behaviour that is influenced by other people's assessment, or assessment of someone who is in some way connected with the user, such as perceived pressure of the environment. Within normative beliefs, motivational factors or customers desire for a consistent behaviour under the influence of others were also measured. Within this study, two basic referents were calculated as normative beliefs: friends and experts in terms of students and clients, and experts in terms of business organizations. The contribution of each of the referents mentioned was measured by motivational factors that a user has to comply with the ideas or wishes of that person.

H1. *Normative beliefs and motivational factors on the use of online surveys are positively related to perceived usefulness of online surveys.*

2.2 Subjective norms

The concept of subjective norms reflects the existence of social explanation, and is recognized as a key concept of the theory of reasoned action [31]. Subjective norms are what makes the theory of reasoned action take into account elements of social influence [35]. Elements of the social impact monitor the impact of different people from the social environment on the consumer and his intentions, behaviours and beliefs, depending on the extent to which each of their views and actions affect a particular attribute. This social aspect of subjective norms reflects in its foundation on the information which are external in relation to the consumers. In addition, it is the perceived pressure of individual's environment to undertake certain activities or certain behaviour. Furthermore, in some way they can also be understood as a social pressure of the environment. It is the pressure of the environment with which the individual is faced when deciding whether to take certain actions or not.

This study selected four types of different people or groups or referents that are considered relevant in the business and consumer world. The contribution of their opinion depends on the importance of individual referent for the targeted users of online surveys within this paper.

H2. *Subjective norms on the use of online surveys are positively related to perceived usefulness of online surveys.*

2.3 Perceived usefulness

Many authors argue that users will accept and use certain technology only if they have recognized the importance and personal benefits of using the technology [20]. As a part of the decision making process the consumer perceives and balances online surveys in relation to other activities, but also to other survey methods, where time invested is the main criteria [18]. Theoretical concept that offers an explanation of recognising the importance of online surveys as a precondition for its acceptance uses gratification approach. According to this concept, users consciously choose and implement a certain technique to meet their specific needs. Katz et al. [19] identified the following three categories of needs as the most important: (i) activities related to

strengthening knowledge and understanding of information, (ii) activities related to strengthening aesthetic, pleasant and emotional experience, (iii) activities related to strengthening social acceptance. The first two categories are found to be particularly relevant within the topic of this paper. The uses and gratification approach implies that the online survey will be accepted by the users only if they perceive it as an opportunity to meet their own needs for information, knowledge, and social acceptance.

H3. *Perceived usefulness of online surveys is positively related to the intention to use online surveys.*

2.4 Perceived risk

User behaviour is strongly influenced by perception of risk. Users are normally insecure in terms of consequences of a decision or action [6]. Furthermore, they prefer to minimize risk rather than maximize utility. Therefore, consumers' subjective perception of risk may significantly influence his/hers behaviour [26]. This is particularly important in the adoption of innovation when users lack experience with new products and find themselves in situations of high risk. They may also try to reduce the risk associated with a particular decision or behaviour. During the decision making process about the technology, the result can be a rejection of innovations. The risk associated with online surveys is generally perceived through data security. Users of new media services often tend to worry about data manipulation, unauthorized data access, and unwanted monitoring of certain services. Other safety issue includes affecting the consumer's privacy. As previously mentioned, the perception of risk significantly affects the user's intention to use online surveys considering it an innovation. The usual relationship between perceived risk and usage intention is negative.

H4. *Perceived risk of online surveys is negatively related to the intention to use online surveys.*

2.5 Usage intention

The intention in this case is a construct which measures whether users really are planning to use an online survey [27]. It is the user's general perception of whether it is desirable to carry out certain activities or not. Intent can be measured by providing an alternative to the user, and asking which alternatives the user is planning to realize. Measure of intention can be unambiguous criterion (e.g. a user is likely to take some action), or criteria with more features (e.g. select among several activities). The theory of planned behaviour defines the usage intention as the amount of effort that a particular user is willing to take to achieve a certain goal [2], or an action plan which enables the achievement of a specific goal [17]. In essence, usage intention can be thought of as targets awaiting values that are the result of a conscious process that requires time and consideration, and focuses on the consequences [24]. The goal of these assumptions is to predict actual behaviour of users of online surveys.

3 Research methodology

3.1 Measurement development

The model presented in the second part of the paper is based on normative beliefs and motivational factors [3], subjective norms [35], perception of usefulness [20] and the perception of risk [6] [26] of end users of online surveys. The questionnaire contains 8 self-produced questions and 14 adapted from several authors and related to perceived usefulness (C1) (based on [6]; [7]), subjective norms (C2) [7], normative beliefs and motivational factors (C3) [7], perceived risk (C4) [16], and usage intention (C5) [7]. The research was conducted in Croatia and thus measurement scale was translated into Croatian. The questionnaire for students comprised of four parts (i) personal information, (ii) general internet and computer usage, (iii) attitudes toward online surveying in general and (iv) five scale Likert-type questions related to constructs (C1-C5). The questionnaire was only slightly modified for business organisations, comprising of (i) information related to type and size of organisation, (ii) working position of a respondent, (iii) attitudes toward online surveying in general and (iv) five scale Likert-type questions related to constructs (C1-C5).

3.2 Data collection and analysis

Empirical data for this research was obtained using an online survey tool Survey Gizmo. Online questionnaires were filled out by undergraduate and graduate students of Faculty of Economics in Split in a proctored environment, i.e. after classes in computer labs and under surveillance of a teaching fellow. The students participated voluntarily as well

and over 320 students out of approximately 400 agreed to participate. They were instructed to access the link to the online questionnaire which was placed on the official e-learning website of the Faculty. The participants were given enough time to complete the questionnaires finishing in approximately 20 minutes. A total number of 322 questionnaires were valid and analyzed.

Additionally, business organisations received an e-mail with a direct and unique link to online questionnaire. The respondents participated voluntarily and they were guaranteed anonymity. Total of 45 completed questionnaires were submitted. Statistical analysis was then performed in SPSS. The analysis was carried out on 22 variables with samples of N=322 (students) and N=45 (business organizations). After the descriptive analysis of data exploratory factor analysis was used to check the convergent and discriminant validity of measurement scales. When considering the students sample, they met the relation criterion of respondents and variables of 5 to 1 [15]. However, business organization sample did not meet the mentioned relation of criterion of respondents and variables, and for this reason, factor analysis was conducted on students' replies only. The extraction method used within this paper was the principal component analysis and Varimax rotation resulting in five factors of eigenvalue 1 or more. The obtained factors meet the Kaiser-Guttman rule according to which the number of factors is determined by the size of the eigenvalue, i.e. the factors retained for further analysis were all those with the eigenvalue exceeding 1. The factors obtained in this way explained 68% of the variance. Kaiser-Meyer-Olkin test result is 0.894 demonstrating that the factor analysis is appropriate for students sample, i.e. that the data fit well with factors, while the Bartlett's test of sphericity is statistically significant. Cronbach's alfa was used to test instrument reliability.

After summarising the results per particular theoretical construct, analysis of the mean values and the corresponding standard deviation followed with correlation analysis. Finally, in order to test the research hypotheses regression analysis was used to explore the relationships between variables.

3.3 Participant demographics

Academics, teachers and lecturers are often forced to use certain methods of research within the papers they publish periodically. In addition, students are also required to perform research within the various activities carried out as part of their education publishing seminal and final papers. As a young, highly educated and technically equipped population, they present a relevant sample to participate in the inspection of the relevant factors associated with the intention to use online surveys.

The participants of the study were students of the Faculty of Economics in Split. Respondents were mostly female (70%) and 98% of them said they own a personal computer or laptop while 99% of respondents use the Internet. On the question related to preferring traditional or online surveys, 80% of students prefer online, 12% traditional surveys, while 7% are not sure.

Table 1. General statistics of the sample (student)

Measure	Items	Frequency	Percent
Gender	Male	95	29.5%
	Female	227	70.5%
Study level	Undergraduate university study	21	6.5%
	Graduate study	118	36.6%
	Professional study	183	56.8%
Do you own a personal computer or laptop?	Yes	314	97.5%
	No	8	2.5%
Do you use internet?	Yes	320	99.4%
	No	2	0.6%
Do you prefer traditional or online surveys?	Traditional	38	11.8%
	Online	260	80.8%
	Not sure	24	7.5%

Justifying the second group of respondents it is important to emphasise that the main purpose of market research in business organisations is to collect valid and reliable information to assist in decision-making processes, planning activities, and business performance controlling. Therefore, business organizations form one of the main groups that have an interest in using online surveys, and present a relevant sample for determination of

factors associated with the intention of using an online questionnaire.

For business organizations, the respondents from 45 organisations replied mostly from businesses with fewer than 50 employees. The questionnaire was completed by CEOs and administrative staff. With regards to their preference, 53% of the respondents prefer online, 31% traditional surveys, while 16 are not sure.

Table 2. General statistics of the sample (business organisations)

Measure	Items	Frequency	Percent
Industry	Construction	6	13.3%
	Financial Services	3	6.7%
	Trade	4	8.9%
	Production	11	24.4%
	Tourism	3	6.7%
	Communications	1	2.2%
	Other	17	37.8%
Organisation size	Less than 10 employees	5	11.1%
	10 to 49 employees	28	62.2%
	From 50 to 249 employees	8	17.8%
	Over 250 employees	4	8.9%
Working position	Owner	3	6.7%
	CEO	17	37.8%
	Sales	7	15.6%
	Marketing	3	6.7%
	Administration	11	24.4%
	IT	3	6.7%
	Other	1	2.2%
Do you prefer traditional or online surveys?	Traditional	14	31.1%
	Online	24	53.3%
	Not sure	7	15.6%

4 Results

By exploratory factor analysis five factors were obtained that explain 68.82% of the variance cumulatively. The first factor explains 15.93% of the variance, second 15.42%, third 13.08%, fourth 13.03%, and fifth 11.35%. The rotated component matrix with manifest variables which have the greatest variance projection on a single factor is shown in table 3. This matrix shows that the measurement scales Perceived usefulness, Subjective norms, Normative beliefs and motivation factors and Perceived risk have the characteristics of convergent (the associated statements have a factor loading on respondent factors higher than 0.6) and discriminant validity (the associated statements have a factor loading on remaining factors lower than 0.4).

Only when talking about the measuring scale Usage intention the statement *"I intend to periodically use online surveys as a part of my own research in the future."* does not show characteristics of convergent and discriminant validity and it is eliminated from the measuring scale in further analysis.

Table 3. Rotated factor matrix

	Factor component				
	1	**2**	**3**	**4**	**5**
Normative beliefs and motivational factors					
If my professors would recommend the use of online surveys, I would accept this proposal.	**.849**	.156	-.065	.189	.179
If experts would recommend the use of online surveys, I would accept this proposal.	**.832**	.175	-.055	.202	.161
If the use of online surveys would mean achieving additional savings, I would accept it.	**.809**	.103	-.025	.193	.058
If my colleagues would recommend the use of online surveys, I would accept this proposal.	**,795**	,229	-,006	,241	,201

Perceived usefulness					
By using online surveys I would demonstrate innovativeness to my colleagues.	,045	**,743**	-,016	,230	,195
Use of online surveys would fit my own image.	,076	**,709**	-,005	,206	,292
By using online surveys I would receive timely information.	,236	**,694**	-,159	,045	,113
By using online surveys I would receive exclusive information.	,068	**,694**	-,016	,171	,087
I find using online surveys interesting.	,349	**,630**	,012	,159	,132
By using online surveys I would achieve multiple benefits.	,153	**,622**	-,044	,223	,308
Perceived risk					
I believe that there is a risk of compromising privacy when using online surveys.	-.025	-.078	**.919**	.004	-.065
I believe that there is a risk of personal data misuse when using online surveys.	.010	-.075	**.902**	.017	-.017
I believe that there is a risk of receiving unwanted content when using online surveys.	.089	.001	**.836**	-.024	-.066
I believe that there is a risk of unwanted charges when using online surveys.	-.254	-.016	**.689**	-.124	.155
Subjective norms					
Students in my surroundings believe that the use of online surveys would be interesting.	.151	.261	-.020	**.807**	.135
Students in my surroundings believe that by using online surveys they would achieve multiple benefits.	.240	.227	-.022	**.794**	.206
Students in my surroundings believe that by using online surveys they would achieve additional savings.	.295	.221	-.075	**.760**	.105
Students in my surroundings prefer using online surveys.	.218	.187	-.027	**.699**	.223
Usage intention					
I intend to fully integrate online surveys as a part of my own research in the future.	.189	.229	.027	.155	**.803**
I intend to routinely and regularly use online surveys as a part of my own research in the future.	.086	.241	.009	.163	**.772**
I intend to recommend the use of online surveys to my colleagues.	.203	.332	-.059	.226	**.684**
I intend to periodically use online surveys as a part of my own research in the future.	.468	.192	-.009	.168	.525

Extraction Method: Principal Component Analysis. Varimax rotation converged in 6 iterations.

Cronbach's α is employed to test instrument reliability ranging from 0 to 1, with values of .60 - .70 deemed the lower limit of acceptability. Table 4 demonstrates that most of the α values are reasonably good (>0.8) but all are acceptable.

Table 4. Instrument reliability

Label	**Scale**	**Students (N=322)** **α**	**Business organisations (N=45)** **α**
C1	Perceived usefulness	0.841	0.940
C2	Subjective norms	0.866	0.861
C3	Normative beliefs and motivational factors	0.909	0.712
C4	Perceived risk	0.864	0.913
C5	Usage intention	0.820	0.894

Descriptive statistics of measurement scales is shown in Table 5. It is evident that both for business organizations and students highest mean is for normative beliefs and motivational factors of using an online survey. The lowest average values in both cases are for the perceived risk of using an online survey.

Table 5. Descriptive statistics of measurement scales

Label	Scale	Items	Students (N=322)		Business organisations (N=45)	
			Mean	St. Dev	Mean	St. Dev
C1	Perceived usefulness	6	3.4	0.63	3.55	0.83
C2	Subjective norms	4	3.4	0.69	2.98	0.64
C3	Normative beliefs and motivational factors	4	3.94	0.7	3.8	0.49
C4	Perceived risk	4	3.04	0.84	2.81	0.88
C5	Usage intention	4	3.35	0.67	3.04	0.71

The two parts of the hypothetical model were assessed separately through regression analysis as follows:

- Association of subjective norms and normative beliefs and motivational factors with the perceived usefulness online surveys,
- Association of perceived usefulness and perceived risk with the intention to use online surveys.

Regression analysis was performed on the summary results of scales. Two sub-models with corresponding results of regression analysis, R^2 and standard beta coefficients are shown in Table 6 for students and Table 7 for business organisations.

For both regression sub-models for students the value of R^2 is higher than 0.34 meaning that 34.4% of the variation and 35.5% respectively in the dependent variable can be explained by the explanatory variables. With regards to business organisations for both regression sub-models the values of R^2 are higher than 0.48.

Table 6. Regression models for students

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1st sub-model	(Constant)	1.243	.176		7.057	.000
	Subjective norms	.400	.050	.435	8.063	.000
	Normative beliefs and motivational factors	.201	.049	.223	4.139	.000
	Dependent Variable: Perceived usefulness R=0.586. R^2=0.344, adjusted R^2=0.340					
		B	Std. Error	Beta		
2nd sub-model	(Constant)	.907	.223		4.076	.000
	Perceived usefulness	.674	.051	.598	13.208	.000
	Perceived risk	.020	.039	.024	.529	.597
	Dependent Variable: Usage intention R=0.596, R^2=0.355, adjusted R^2=0.351					

Table 7. Regression models for business organisations

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1st sub-model	(Constant)	.143	.707		.202	.841
	Subjective norms	.912	.139	.706	6.559	.000
	Normative beliefs and motivational factors	.180	.183	.106	.983	.331
	Dependent Variable: Perceived usefulness R=0.743 R^2=0.552, adjusted R^2=0.530					
		B	Std. Error	Beta		
2nd sub-model	(Constant)	1.030	.483		2.133	.039
	Perceived usefulness	.589	.097	.688	6.046	.000
	Perceived risk	-.026	.091	-.033	-.289	.774
	Dependent Variable: Usage intention R=0.697, R^2=0.486, adjusted R^2=0.461					

The regression results for student dataset suggest that all of the independent variables in both sub-models are significant influencers except perceived risk.

The results for business organisations suggest that subjective norms and perceived usefulness are significant influencers.

5 Discussion and conclusion

This research covers evaluation of factors associated with the use of online surveys by students and within business organizations. The research proposed that the subjective norms are positively related to perceived usefulness of online surveys while the perceived usefulness is positively related to intention to use online surveys. Perceived usefulness of online surveys has a significant positive correlation with the intention to use online surveys since most users will try to find personal benefit before implementing online surveys. In other words, a higher the benefit perceived from using the online surveys - greater the chance that the online surveys will actually be used.

Bearing in mind that only the negative relation between perceived risk and intentions to use the online survey was not statistically significant for both groups, increased perception of risk, however, may adversely affect the intended use of the online survey. However, in recent years, special attention was given to computer security, and thus the perception of computer security increases. This may stand for one of the reasons why the negative effect of the risk perception on the intended use an online surveys is not proven. Thus, increasing computer security in recent times led to it becoming less relevant "scary" factor when implementing new technologies, in this particular case - online survey. The risk is becoming a less significant decision making factor with the rapid growth of computer security.

Furthermore normative beliefs and motivational factors cannot be confirmed as significant influencers for both groups of respondents. The key role in the implementation of online surveys is played by friends and experts when talking about students. The referents mentioned stand for the social influence of the environment. Faced with the new technologies, students first consult with the opinion of friends or experts. This so called referents perception becomes extremely important in forming their own opinions about online surveys. In other words, an individual usually follows their advice and opinions, and absorbs them. Recently there are simply too many new technologies expanding, which makes it logical to expect that the young individuals will require the help of others to make the decision on the implementation of online surveys whereas the companies have external consultants evaluating the benefits of new technological tools.

Table 8. Findings of the study

Description		**Results (students)**	**Results (business organizations)**
H1	*Normative beliefs and motivational factors on the use of online surveys are positively related to perceived usefulness of online surveys.*	Accepted	Not accepted
H2	*Subjective norms on the use of online surveys are positively related to perceived usefulness of online surveys.*	Accepted	Accepted
H3	*Perceived usefulness of online surveys is positively related to the intention to use online surveys.*	Accepted	Accepted
H4	*Perceived risk of online surveys is negatively related to the intention to use online surveys.*	Not accepted	Not accepted

The use of online surveys still presents a relatively new area that has not been fully evaluated. Online research is the most used type of research among individual users or students [42] and business organizations [14]. Despite the rapid progress of Internet technologies, the factors that influence the acceptance and use of online surveys can still be considered relatively unknown. Bearing this in mind, it was not possible to examine all its aspects within this paper. However, the results enclosed clearly point out the future trends and frameworks for expanding online surveys. It has been shown that a few factors have a significant direct or indirect impact on the application use of online surveys. When considering student population or the academic community in general, online surveys play an important role, particularly within the academic research [9]. On the question related to preferring traditional or online surveys, 81% of students vs. 53% of business people prefer online surveys. This can be easily explained by the fact that students are a younger generation who grew up with computers and the Internet, and the technology in general. Another reason of this variation may be that business organizations use online surveys in specific settings, mostly through marketing of services [29],

consumer marketing [34] and other areas of marketing.

Observing the results of this research, there are good reasons to assume that online surveys will have a significant growth in the future. Also, the results showed that the application of a modified theory of planned behaviour helped us better understand the factors that influence the use of online surveys. Finally, further research within the field of online surveys should be focused on achieving a higher quality of responses as well as discussing the potential privacy risks when using online survey tools.

References:

[1] Ajzen, I., *Attitudes, personality, and behavior*, Dorsey Press, Chicago, USA, 1988.

[2] Ajzen, I., *The theory of planned behavior*, Organizational Behavior and Human Decision processes, Vol. 50, 1991, pp. 179-211.

[3] Ajzen, I., Fishbein, M., *Understanding Attitudes and Predicting Social Behavior*, Prentice-Hall, Englewood Cliffs, USA, 1980.

[4] Andrews, D., Nonnecke, B., Preece, J., *Electronic survey methodology: A case study in reaching hard-to-involve Internet users*, International Journal of Human-Computer Interaction, Vol. 16(2), 2003, pp. 185-210.

[5] Archer, T.M., *Web-based surveys*, Journal of Extension, Vol. 41(2), 2003, Available at: http://www.joe.org/joe/2003august/tt6.php

[6] Bauer, A., *Konsumentenentscheidungen als Risikoverhalten*, Marketing-Soziologie, K.G. Specht & G. Wiswede (eds.), Duncker Humblot, Berlin, 1976, pp. 207-217.

[7] Chuang, S.T., Wu, T.F., Lin, C.C., *Predicting User Behavior of Mobile Service: Toward the Theory of Reasoned Action*, Overseas Chinese Institute of Technology, China, 2006.

[8] Craig, C.S., Douglas, S.P., *Conducting International Marketing Research in the Twenty-First Century*, International Marketing Review, Vol. 18(1), 2001, pp. 80-90.

[9] Cycyota, C.S., Harrison, D.A., *What (not) to expect when surveying executives: A meta-analysis of top manager response rates and techniques over time*, Organizational Research Methods, Vol. 9(2), 2006, pp. 133–60.

[10] Dillman, D.A., Tortora, R.D., Bowker, D., *Principles for constructing web surveys*, SESRC Technical Report, Pullman, Washington, USA, 2001.

[11] Fishbein, M., Ajzen, I., *Predicting and understanding consumer behavior: Attitude behavior correspondence*, Understanding attitudes and predicting social behavior, Englewood Cliffs, USA, 1980.

[12] Fricker, S., Galesic, M., Tourangeau, R., Yan, T., *An experimental comparison of web and telephone surveys*, Public Opinion Quarterly, Vol. 69, 2005, pp. 370-392.

[13] Gesell, S.B., Drain, M., Clark, P.A., Sullivan, M.P., *Test of a Web and Paper Employee Satisfaction Survey: Comparison of Respondents and Non-Respondents*, International Journal of Internet Science, Vol. 2, 2007, pp. 45-58.

[14] Grant, D.B., Teller, C., Teller, W., *Hidden opportunities and benefits in using web-based business-to-business surveys*, International Journal of Market Research, Vol. 47(6), 2005, pp. 641–66.

[15] Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., *Multivariate Data Analysis*, Pearson Prentice Hall, 2010.

[16] Hess J., *Construction and assessment of a scale to measure consumer Trust*, Conference AMA Educators' Enhancing Knowledge development in Marketing, B.B. Stern & G.M. Zinkhan (Eds.), Vol. 6, 1995, pp. 20-25.

[17] Higgins, E.T., Kruglanski, A.W., *Social Psychology: Handbook of Basic Principles*, The Guilford Press, New York, USA, 1996, pp. 297-328.

[18] Kaas, K.P., *Nutzen und Kosten der Werbung*, ZfbF, Vol. 42(6), 1990, pp. 492-504.

[19] Katz, E., Haas, H., Gurevitch, M., *On the Use of the Mass Media for Important Things*, American Sociological Review, Vol. 38(2), 1973, pp. 164-181.

[20] Kavassalis, P., Spyropoulou, N., Drossos D., Mitrokostas E., Gikas G., Hatzistamatiou A., *Mobile Permission Marketing: Framing the Market Inquiry*, International Journal of Electronic Commerce, Vol. 8(1), 2003, pp. 55-79.

[21] Kaye, B.K., Johnson, T.J., *Research Methodology: Taming the Cyber Frontier*, Social Science Computer Review, Vol. 17, 1999, pp. 323-337.

[22] Langer, E.J., *Mindfulness reading*, Reading, MA: Merloyd Lawrance Books, USA, 1989.

[23] Liska, A.E., *A critical examination of the casual structure of the Fishbein-Ajzen model*, Social Psychology Quarterly, Vol. 47, USA, 1984.

[24] Loewenstein, G.F., Weber, E.U., Hsee, C.K., Welch, N., *Risk as feelings*, Psychological Bulletin, Vol. 127, 2001, pp. 267-286.

[25] Medin, C., Roy, S., Ann, T., *World Wide Web versus mail surveys: A comparison and report*, Paper presentation at ANZMAC99 Conference, Marketing in the Third Millennium, Sydney, Australia, 1999.

[26] Mitchell, V.W., *Consumer Perceived Risk: Conceptualisations and Models*, Journal of Marketing, Vol. 33(1), 1999, pp. 163-196.

[27] Morris, M.G., Dillon, A., *The influence of user perceptions on software utilization: Application and evaluation of a theoretical model of Technology Acceptance*, IEEE Transactions on Software Engineering, Vol. 14(A), 1997, pp. 58-65.

[28] Nonnecke, B., Preece, J., Andrews, D., Voutour, R., *Online Lurkers Tell Why*, Paper presented at the 2004 Americas Conference on Information Systems, New York, NY, 2004.

[29] O'Cass, A., Fenech, T., *Web retailing adoption: Exploring the nature of Internet users web retailing behavior*, Journal of Retailing & Consumer Services, Vol. 560, No. 10(2), 2003, pp. 81–94.

[30] Pavlić, D., Jadrić, M., Garača, Ž.,*Research of Mobile Marketing Usage Potential*, Proceedings of the scientific conference of management departments with international participation, Vol. 1, Croatia, 2011.

[31] Randall, D.M., *Taking stock: can the theory of reasoned action explain unethical conduct?*, Journal of Business Ethics, Vol. 8(11), 1989, pp. 873-882.

[32] Roster, C.A., Rogers, R.D., Albaum, G., Klein, D., *A comparison of response characteristics from web and telephone surveys*, International Journal of Market Research, Vol. 46(3), 2004, pp. 359- 373.

[33] Schmidt, J.B., Calantone, R.J., Griffin, A., Montoya-Weiss, M.M., *Do certified mail third-wave follow-ups really boost response rates and quality?*, Marketing Letters, Vol. 16(2), 2005, pp. 129-141.

[34] Seiders, K., Voss, G.B., Grewal, D., Godfrey, A.L., *Do satisfied customers buy more? Examining moderating influences in a retailing context*, Journal of Marketing, Vol. 69(4), 2005, pp. 26–43.

[35] Shih, Y.Y., Fang, K., *The use of a decomposed theory of planned behavior to study Internet banking in Taiwan*, Internet Research, Vol. 14(3), 2004, pp. 213-223.

[36] Slevin, J., *An integrated approach: Technology firm conducts worldwide satisfaction research survey via e-mail, Internet*, Quirk's Marketing Research Review, 1997.

[37] Smith, C.B., *Casting the net: Surveying an Internet population*, Journal of Computer Mediated Communication, 1997.

[38] Solomon, D.J., *Conducting Web-Based Surveys*, Office of Medical Education Research and Development, College of Human Medicine, Michigan State University, USA, 2001.

[39] Walters, S., *CGE&Y's Point of View on Next-Generation Marketing and Customer Profitability*, CGE&Y White Paper, USA, 2002.

[40] Watt, J.H., *Using the Internet for quantitative survey research*, Quirk's Marketing Research Review, 1997.

[41] Wellman, B., *The Internet in Everyday Life*, Blackwell Publishers, London: UK, 2002, pp. 215-243.

[42] Zviran, M., Glezer, C., Avni, I., *User satisfaction from commercial web-sites: The effect of design and use*, Information & Management, Vol. 43(2), 2006, pp. 157–78.