Virtual life of men. Gender differences in Internet using habits and attitudes[1]

PÉTER NÉMETH[2] – ÁKOS ANDRÁS NAGY[3] – KRISZTIÁN SZŰCS[4] – MÁRIA TÖRŐCSIK[5]

Recent surveys show that men and women behave differently in their everyday life, especially during shopping, free time or even housework. The present article aims to present the gender differences in habits, behaviour and attitudes regarding internet usage. We conducted a survey with a sample of 2000 respondents which expressed their attitudes towards internet usage and online behaviour. The sample consists of 956 men and 1044 women. It is important and interesting to observe the gender differences related to the aforementioned topics as it allows us to draw further conclusions concerning the online behaviour of different segments. We analyzed the dissimilarities in habits (e.g. regularity, length, activities etc.) and attitudes of men and women in the sample towards internet usage. We focused on men's virtual life, and this is why we also aimed to analyze the generational differences among male internet users. Furthermore, by using a multivariate analysis, we identified groups of men based on their virtual habits and behaviour. We found that, in general, men are more interested in IT than women, while women are usually more concerned about internet security. Men use internet with a higher participation rate and also more frequently. Men have a higher participation rate when it comes to online activities. On the other hand, women perform more social activities on the internet with a higher participation rate than men. As we

[1] This article is the result of a research project supported by SROP-4.2.2.A-11/1/KONV-2012-0058, Modelling the effects of the energy production, utilization and waste management technologies to the competitiveness of cities and regions.

[2] PhD student, University of Pécs, Faculty of Business and Economics, e-mail: nemeth.peter.pte@gmail.com.

[3] PhD, assistant lecturer, University of Pécs, Faculty of Business and Economics,e-mail: nagya@ktk.pte.hu.

[4] PhD, senior lecturer, University of Pécs, Faculty of Business and Economics, e-mail: szucsk@ktk.pte.hu.

[5] PhD, professor, University of Pécs, Faculty of Business and Economics, e-mail:

expected, these results show that the difference between the internet usage habits of men and women exists.

Keywords: internet using, virtual life, gender differences, groups of men.
JEL code: M31.

Introduction and objectives

"Men and women are different" – it is a common sentence applicable to almost everything in everyday life. If we think about internet usage, we can say that men have extensively been associated with technology while women have often been depicted as somewhat passive users (Gad 2012). In our study we present a short review of gender differences concerning internet usage and internet connected attitudes, such as internet access, mobile internet access, the proportion of smartphone owners, the frequency of internet usage and internet usage attitudes. Moreover, in order to see the different types of internet user men we established a cluster analysis and identified different groups of male respondents.

At the beginning of our comparable study – in the literature review – we mostly discuss topics in connection with internet usage and online shopping. Thus, we can see the differences between the research presented in this study and other researches on this topic. At the end of the article we compare our results with other researches presented in the literature review.

Literature review

Gender differences have been of interest to advertisers and marketers for decades. Alreck and Settle (2002) examined online, catalogue and store shopping behaviour of men and women. The result of their study indicated with substantial clarity that women do hold markedly more positive and less negative attitudes toward the shopping experience. Women have a more favourable view toward shopping and they more often use a value to optimise the shopping strategy than men do. According to the study of Alreck and Settle women hold a much more positive image of store and catalogue shopping than men. Moreover, they found that women's attitude towards internet shopping were approximately the same as men's perspective.

Van Slyke et al. (2002) demonstrated in their study that women view Web-based shopping less favourable than men. They offer a few steps for organizations to improve women's perceptions concerning Web-based shopping. In their opinion, Web merchants may consider using a technology in order to increase the sense of community by creating a social forum for their customers. Van Slyke et al. found that women enjoy the social aspect of shopping, so merchants should consider establishing chat rooms and building communities.

Roogers and Harris (2003) examined the attitudes towards e-commerce among different gender internet users. Their findings revealed that the women from their sample were less emotionally satisfied with e-shopping than men, because they were sceptical of this venue and did not find it as convenient as males. Men respondents reported greater trust in internet shopping and perceived the internet as a more convenient shopping outlet than women did. The authors also found that men had more positive attitudes toward internet shopping in general. As Roogers and Harris expected, emotion, trust and convenience predicted women's negative and men's positive attitudes towards the internet, emotion and trust predicted the frequency with which males and females made online purchases during a month. In a nutshell, their research showed that emotion, trust and convenience are three critical determinants of women's and men's shopping attitudes and behaviour.

Yang and Lester (2005) researched the gender differences in e-commerce. They compared the predictors of online shopping for men and women by using a sample of 365 college students. For men, the only predictor of purchasing products online was the number of hours they spent online. For women, the predictors of making purchases online included anxiety about using computers and attitudes towards money, in addition to the number of hours spent online.

Alreck et al. (n.a.) prepared a comparable analysis concerning men and women's attitudes towards online and store shopping. According to their results perhaps the most noteworthy difference between men's and women's ratings were for the statement *"Online shopping is more boring and less fun than store shopping."* Women's enjoyment of store shopping

is obvious as they highly rated the online shopping problem statement. Women were also more concerned than their male counterparts about the time and effort required to find what they want online. It seems to be that for women store shopping is more fun but online shopping is easier. By contrast, men appear to feel that online shopping is an effective way to avoid the hassle of store shopping.

Alreck et al. established a generational comparable analysis. They analyzed three groups: seniors, younger respondents and juniors. They found that the senior group of respondents was more concerned than the junior group about the problems regarding information security and the difficulty and complexity of online shopping. While the younger group was least concerned about the sale of mailing lists, that and the credit card information security were the two top concerns for all three age groups.

Based on the above mentioned literature review we can see that there are differences regarding gender issues in internet using habits, especially when it comes to online shopping habits and attitudes. With our complex questionnaire one of our aims was to highlight the differences about the time spent on the internet, the frequency of internet usage, online activities and also about internet using attitudes. Thus, based on these attitudes, different groups of men will be identified in order to see different behavioural patterns concerning men's internet usage.

Research methods

In our research, we examined 2000 respondents in Hungary with a face-to-face questionnaire. This questionnaire is a part of a complex research at the University of Pécs Faculty of Business and Economics. This research project was supported by SROP-4.2.2.A-11/1/KONV-2012-0058, Modelling the effects of the energy production, utilization and waste management technologies to the competitiveness of cities and regions.

The sample represented the Hungarian population by the following demographic characteristics: gender, age, education, region and the residence's type of settlement. We presented a univariate analysis: first,

we performed a comparable analysis of men's and women's attitudes concerning their internet usage. Moreover, we applied a multivariate analysis as well; we identified different groups of men who use internet every day by using a factor and cluster analysis. During our examination and analysis we used SPSS Statistics 20. Table 1 shows the main demographic characteristics of men who participated in the research.

Table 1. The demographic characteristics of male respondents (n=956)

Type of residence (n=956)	
Budapest	16.9%
town with county rights	23.8%
10.000+ settlement	22.4%
settlement with population between 2.000 and 10.000	20.8%
settlement with population less than 2.000	16.0%
sum	100.0%

Age (n=956)	
18-29 years	26.4%
30-39 years	20.1%
40-49 years	21.8%
50-59 years	17.4%
over 60 years	14.3%
sum	100.0%

Education (n=956)	
grade school	7.5%
vocational school	32.9%
secondary school	41.1%
college	10.8%
university	4.7%
did not respond	2.9%
sum	100.0%

Marital status (n=956)	
single	27.0%
in a relationship	16.0%
married	45.2%
divorced	4.8%
widow	2.5%
common-law marriage	4.5%
sum	100.0%

Source: own research

We examined the population's internet usage and also its attitude towards this topic. Thus, in this article we present the results concerning the internet access of the respondents, the frequency of internet usage, the average time spent on internet, the activities on internet, the attitudes towards internet usage and the number of connections on different channels (personal, online and mobile phone).

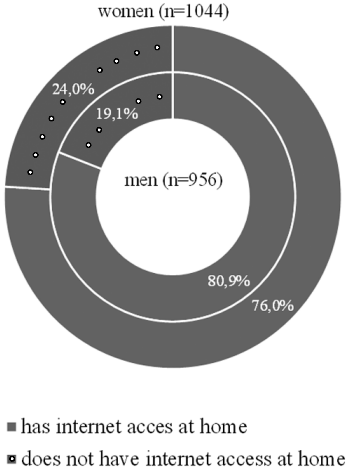
After examining these aforementioned topics, the reader will be able to see the main differences of the gender's internet usage and also will be

able to identify the main behavioural patterns of men and women in connection with virtual life. The frequency, the internet access and the average time spent on internet show us the basic attitudes and habits of men and women. The differences in the evaluation of attitude statements and the number of connections on different channels are good indicators to see the differences of opinion between genders concerning internet related topics and their attitudes on human relationships. Attitude statements provide a starting base in order to establish a factor and cluster analysis to identify the groups of respondents.

In our opinion, due to the research method and the size of the sample, based on the results we can draw general conclusions about the gender differences regarding the examined topics.

Results and discussion, findings

Results show that 80.9% of men have internet access at home (Figure 1). The proportion of women with internet access at home is lower (76%).

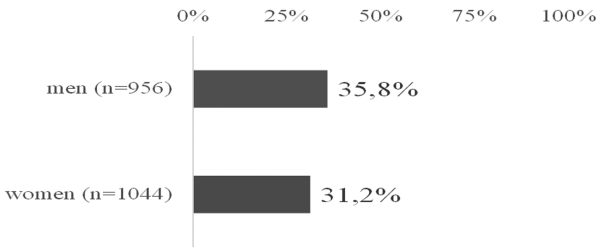


Source: own research

Figure 1. Internet access – gender differences

26.8% of men have mobile internet access and the proportion of women who have internet on their mobile phone is 22.1%. 35.8% of

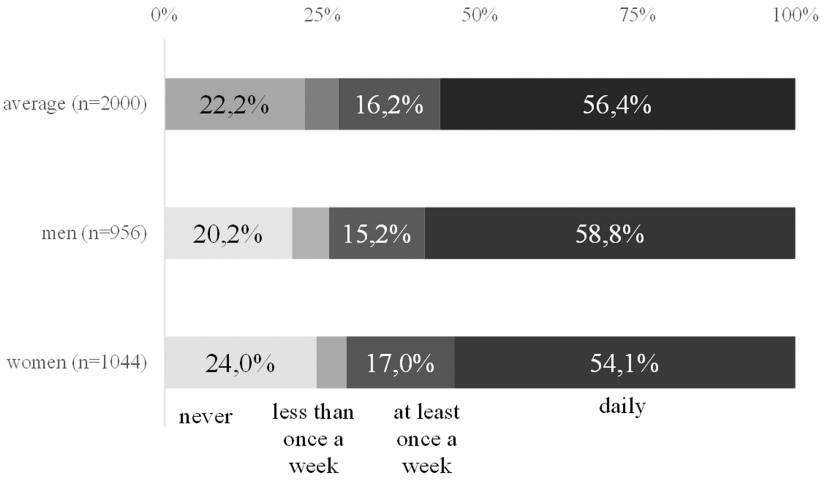
men and 31.2% of women stated that they are smartphones owners – Figure 2.



Source: own research

Figure 2. Proportion of smartphone owners – gender differences

In our research we examined the frequency of internet usage by men and women. The proportion of men who use internet every day is higher than the proportion of women who use internet daily. 24% of women and 20% of men never use internet (Figure 3).

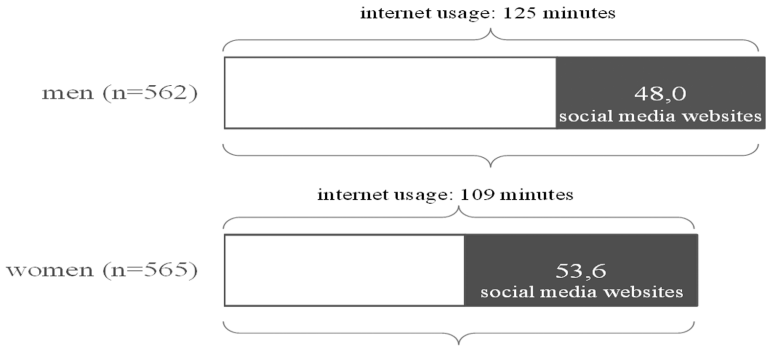


Source: own research

Figure 3. Frequency of Internet usage

Among male respondents we examined generational differences: results show that younger respondents spend more time on the internet.

In the further sections of our research we examined the internet usage and the attitudes of those men and women who use the World Wide Web every day. Men spend more time on the internet daily, but women spend more time on the social media websites. Men spend an average 125 minutes on the internet every day, while women spend 109 minutes on the same activity. In terms of time spent on the internet there is a statistically significant difference between genders (Figure 4).



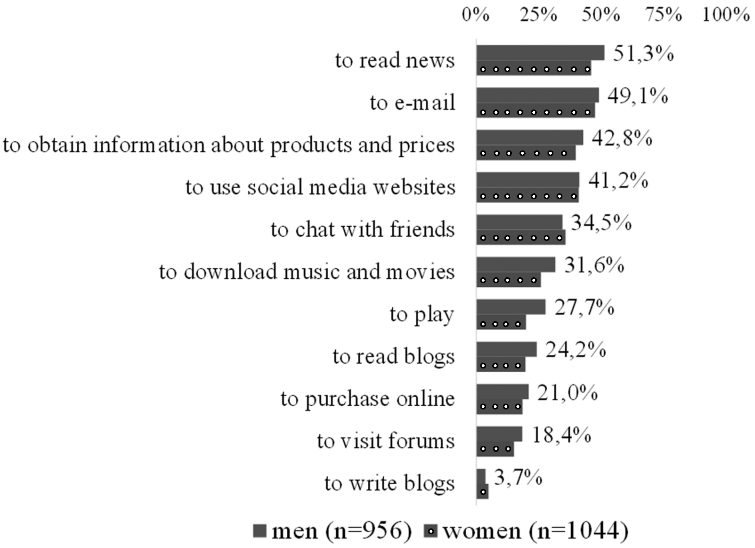
Source: own research

Figure 4. Time spent on the internet and social media websites (minutes)

The results of our generational analysis show that young men who use internet every day, use it for the longest time. The internet usage (without social media websites) for men aged between 50 and 59 is longer than the average. Men over 60 use internet for the shortest time among those who use internet every day.

The most popular online activities are reading news and e-mails, obtaining information about products and prices and using social media websites. The least popular activity among the analyzed ones is writing blogs. Results show that men are more active in most of the activities. Women have a higher proportion in having a chat with friends online.

Women and men participate with the same proportion in using social media websites (Figure 5).



Source: own research

Figure 5. Online activities – gender differences

We examined the different generations of men respondents and we found that young respondents – between 18 and 29 – have a higher participation rate when it comes to online activities. Middle aged respondents – between 30 and 49 – have a higher participation rate than the average when it comes to obtain information about prices and products, use social media websites, read blogs, visit forums and purchase.

Attitudes towards internet usage were also an element of our comparable study. We compared the average of men's and women's evaluations for each attitude. Figure 6 reveals the differences between these attitudes. This figure shows that men are more likely to watch videos online, to follow important brands and to read blogs. Men are not that worried to give their personal data online and they enjoy more to see informative contents on social media websites. Women are more worried

that others are following their online habits, but they are more entertained if they can research/follow other people's life on the internet. Uploading pictures and other contents is more common among women.



Source: own research

Figure 6. Differences between men and women concerning internet usage attitudes

When analysing the different generations of men we found that young respondents are more active and they are more likely to do things online. The elder respondents evaluated were found to be mostly external observers of online contents.

Men reported to have more contacts than women. In general, men have an average of 21 acquaintances and women have an average of 18. On average, men keep in touch with 18 people on mobile phone, while women keep in touch 13 on the same channel. Men have an average of 25

connections on the internet, while women have 17. It is an interesting result that men have a greater number of acquaintances on the internet, in contrast women have more relationships.

Groups of male frequent internet users

In order to see the different types of men in terms of internet usage we used a multivariate statistical analysis. The main aim of this kind of analysis was to identify different groups of men based on their attitudes towards internet usage. These groups (clusters) are homogeneous inside and externally heterogeneous, thus the groups are different from each other, but in a group we can find similar respondents.

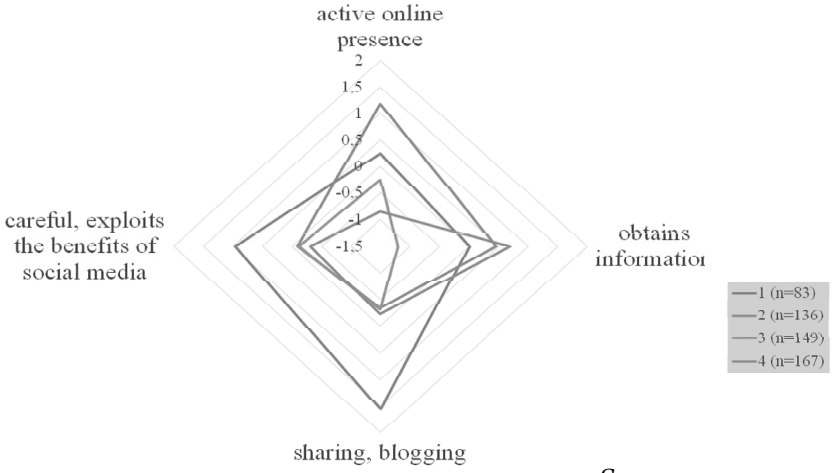
Table 2. Rotated component matrix (factor analysis)

Rotated Component Matrixa				
	Component			
	active online presence	**obtains information**	**sharing, blogging**	**careful, exploits the benefits of social media**
I am usually an external observer of the online contents.	-0,784826742			
I often upload pictures and other contents on social media websites.	0,78050866			
I often tell my opinion about a topic on social media websites.	0,72887802			
I am an active member of online fanclubs.	0,603894087			
I often ask for help via social media.				0,611012664
I am afraid of others following my habits on internet.				0,809982611
In the virtual anonimity it is easier to share my problems as in reality.			0,582317992	
I enjoy reading blogs.			0,674352532	
I enjoy writing blogs.			0,782335136	
Most people only show their good side on social media websites.		0,485207491		
I am glad to follow the important brands on social media websites.		0,428944402		
I enjoy watching videos made by professionals on video sharing websites.		0,763162439		
I enjoy watching videos made by non-professionals on video sharing websites.		0,759730407		
I am glad to see informative contents on social media websites.		0,768144959		
Extraction Method: Principal Component Analysis.				
a. Rotation converged in 7 iterations.				

Source: own research

As a first step we established a factor analysis. This analysis helps us to reduce the attitudes into factors without having a massive information loss. The Kaiser-Meyer-Olkin Measure was 0.879 which means that the attitudes involved in the factor analysis are appropriate for the analysis. The rotated component matrix (Table 2) is the result of the factor analysis. We involved 14 attitudes into our analysis and it resulted in 4 factors. These factors are the following: *active online presence*, *obtains information*, *sharing-blogging* and *careful, who exploits the benefits of social media*. The names of these factors depend on their meanings, so the attitudes explain the factors.

The cluster analysis is the second step of our multivariate analysis. The essence of this method is to identify different groups of respondents based on these factors. We used k-means cluster analysis and we identified four different groups of men who use internet every day. Figure 7. emphasizes the connection between the factors and clusters (respondents' groups).



Source: own research

Figure 7. The relationship between clusters and factors

Based on the demographic differences of the clusters and the connection between factors and clusters we provide a short introduction of the groups of men:

1. Sharing youth: in this group the proportion of younger members – between 18 and 39 – is higher than the average. The proportion of respondents from Budapest and with an education of secondary school is also higher than the average. They assessed the sharing-blogging, and carefully exploiting the social media factors over the average.

2. Information seeker, online active youth: in this group the proportion of 18-39 years old respondents is higher than the average. They mostly live in smaller settlements and have a lower education. They are mostly active online and obtain information on the World Wide Web.

3. Non-interested: the members of this group are mostly over 40, they live in smaller settlements and have a lower education. They are not interested in any of the factors.

4. Information seeker seniors: among these respondents the proportion of men over 40 is higher than the average. Also, people who live at least in a middle-sized settlement and who are high educated are more likely to be the member of this group. They highly rated the factor called "obtains information".

Conclusions

The results of our research show that men are more open when it comes to internet and things which are in connection with the World Wide Web. On the other hand, women are more focused on internet security issues. Women's enjoyment of store shopping is higher while men's enjoyment is higher in case of online shopping. Men use internet more frequently than women, and they enjoy it more. Men develop online activities more than women; while women are more socially active (e.g. having a chat with friends).

According to these results we conclude that women are more emotional when it comes to internet usage. We drew this conclusion as we found that for them internet usage is rather connected with social activities. Van Slyke et al. (2002) arrived to the same conclusion during their research. For men internet usage is rather an entertaining activity: men like to watch videos online and they participate in most of the examined online activities with a higher participation rate than women do. The results of this study justify our presuppositions that men and

women are different in terms of internet usage, and while women have a "social" role, men have more like a "player" role in their online presence.

These results can be helpful for decision makers. As Van Slyke et al. (2002) demonstrated: due to the fact that women are more socially open, Web merchants may consider using a technology to increase the sense of community by creating a social forum for their customers. Roogers and Harris (2003) found that women are more sceptical and they do not find this venue as convenient as men do. In our research, we reached the conclusions that these statements are correct: women are more afraid that others are following their habits on the internet; furthermore, men are less reluctant to give personal data online. Also, we found that men agreed with a higher rate that they can find many informative contents on the internet. Alreck et al. (n.a.) discovered in their research that men find online shopping more effective and they can find online what they want easier than women do. In parallel, in our research we found that men have a higher participation rate in case of online shopping.

An idea and plan for further research that can be a new perspective is to study the group of all men – not just those men groups who use internet every day – by approaching internet connected things and attitudes. Also, another interesting topic is to identify the groups of women frequent internet users and compare them to the groups of men.

References

Alreck, P., and Settle, R. B. (2002). Gender effects on Internet, catalogue and store shopping. *Journal of Database Marketing,* 9(2), 150–162.

Alreck, P., L., DiBartolo, G. R., Diriker, M. F. and Settle, R. B. (n.d.): Images of Online and Store Shopping by Men and Women, Young and Old. *Marketing Educators Research Group,* http://beacon.salisbury.edu/MERG/Image.pdf, downloaded at 26.10.2013.

Gad, K. A. (2012). The Impact of Demographics and Technology Readiness on Egyptians' Attitude towards E-Shopping. In: *International Conference on Transport, Environment & Medical Sciences (ICTEMS'2012)* August 25-26, 2012 Kuala Lumpur (Malaysia).

Roogers, S. and Harris, M. A. (2003). Gender and E-Commerce: An Exploratory Study. *Journal of Advertising Research,* 43(3), 322-329.

Van Slyke, C., Comunale, C. L., Belanger, F. (2002). Gender Differences in Perceptions of Web-based Shopping. *Communications of the ACM*, 45(8), 82-86.

Yang, B. and Lester, D. (2005). Gender differences in e-commerce. *Applied Economics*, 37, 2077–2089.