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Full Length Research Paper

The predictive impact of socio-demographic and behavioural factors on professionals' e-commerce attitudes

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This paper first reviews the e-commerce issues in general and then gives a detailed report of the findings of a survey concerning how sociodemographic (gender and income) and behavioural (computer experience and average daily use of the Internet) factors influence e-commerce attitude of professionals. The survey was conducted among professionals from the government and private sectors. The results indicated that income is significantly related to the usage of e-commerce. Additionally, computer experience and average daily use of the internet were found to be significant in explaining usage reason for e-commerce users whereas the variable income was found to be significant in explaining nonusage reason for e-commerce nonusers.

Key words: E-commerce, demographic, behavioural, gender, income, computer experience, internet, bivariate ordinal logistic regression.

INTRODUCTION

Electronic commerce (also referred to as e-commerce) is exactly analogous to a marketplace on the internet and has exploded over the last 10 years. It consists primarily of distributing, buying, selling, marketing, exchanging and servicing of products or services over electronic systems such as the internet and other computer networks with no barriers of time or distance (Turban and King, 2003). This means e-commerce is becoming an increasingly essential tool for organizations in general, and for small and medium-sized enterprises (SMEs) in particular, in gaining competitive advantage and in accessing global markets (Poon and Swatman, 1995). E-commerce is also advantageous to consumers since there is no geographical boundation for companies and a variety of products is available at any time and anywhere with better prices. While the conventional commerce literature holds sufficient evidence to support the effect of culture on purchase decisions, less empirical evidence is available to support this phenomenon in the e-commerce context (Miles et al., 2000). Levy (2002) reported the influence of citizens' attributes, including gender, education, income, age and households with regard to opportunities to access information and communication technologies (ICT's). In a more recent article, Lian and Lin (2008) have identified consumer characteristics and personal perceived values as the determinants of consumer acceptance of online commerce. Available studies have generally focused on academic populations (Hwang et al., 2006; Liu et al., 2005) and ordinary citizens (Chow and O, 2006; Farag et al., 2006).

Perceived ease of use and perceived usefulness have a significant effect on behavioral intention in online commerce (Pin and Hsin-Hui, 2005) and e-commerce usage among specific groups with different natures still remains unexplored. In particular, the populations of professionals constitute one of the largest groups and play an important role in the adoption of new technologies, which affects many sectors such as commerce, industry, services etc. According to Jin et al. (2007) professionals' use of the internet services may show entirely different patterns from other groups in the society due to the differences in understanding the required knowledge, subject knowledge, technical skills and perception of proficiency

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possessed. All these imply that findings reported by various e-commerce studies for different groups (academics, students, citizens etc.) may not be applicable to professionals. Therefore, research on the e-commerce attitude of professionals may expand the important philosophical debate on bussiness strategies.

Keeping these in view, this study is based on the models to investigate the predictive impact of socio-demographic and behavioural factors on e-commerce usage based on the data collected from professionals from government and private sector organizations. For the purpose of this study, professionals refer to employees, whereas "government" and "private" sectors comprise national government departments and private corporations respectively. Here, it is important to note that institutions providing nonprofit public services (e.g. universities, local government, etc.) have been categorized as government sector organizations. Many of the articles in the field address e-commerce issues in Western Europe and the United States (US). Although they cover important territory and provide useful insights that can give direction in the examination of the issues from a global perspective, the results of these studies may not be applicable to the other parts of the world due to the existence of social, cultural and economical differences (Sanayei, 2008). Comparatively, very little has been researched so far in this field in developing countries (Sanayei, 2008). As a developing country, Turkey is a dynamic, emerging market economy strategically located between Europe and is the world's 17th most industrialized nation. Turkey has undergone a series of major changes in recent years, such as entrance into customs union with the EU in 1996 and inclusion on the list of candidate countries in 1999. These changes have had a certain impact on organizations and society (Aycan, 2001) and organizations are investing significant resources for the development of their information technologies.

Due to the level of proliferation of IT among organizations, the impact of e-commerce on the economy is considerable. Some of the available studies in the country reported on various issues of e-commerce in Turkey, such as opportunities with e-commerce in developing countries (State Planning Organization, 1999), electronic commerce in small and medium scale enterprises (Bozkurt, 1999), impact of e-commerce on the business sector in Turkey (Yumusak, 2005) and comparison of conventional and electronic commerce (Altınok et al., 2003). These studies do not provide a systematic and exploratory analysis for the investigation of the use of e-commerce. Collyer et al. (2001) compared Turkish and Romanian multimedia companies from the e-business perspective and concluded that Turkish companies are ready to place emphasis on creativity, business and interpersonal skills. Their study did not consider socio-economic factors and was devoted to multimedia companies only. In two other articles, Lightner et al. (2002) studied the shopping behaviour and preferences in e-commerce of Turkish and American university students and Hwang et al. (2006) studied the internationalisation of e-commerce and compared online shopping preferences among Korean, Turkish and US populations. However, both of these studies are based on data collected from university students and do not shed light on the impact of demographic and behavioural factors.

Against this backdrop, the present study was thus undertaken to investigate the predictive impact of selected socio-demographic (gender and income) and behavioral factors (computer experience and average daily use of the Internet) on e-commerce attitude of professionals in Turkey. The remainder of this paper is organized as follows: The following part introduces the research model and hypotheses. Research instrument and research methodology are clearly stated in the next part. The results of the analysis are then presented and discussed in the following two parts. The conclusion constitutes the last part.

RESEARCH MODEL AND HYPOTHESES

Based on the available literature, the research model was developed to investigate the relationship between dependent and independent variables (Figure 1). Two sets of decision variables (demographics and behavioural) constitute the independent variables whereas "use of e-commerce (y_1)", "reason for using e-commerce (y_2)" and "reason for not using e-commerce (y_3)" are dependent variables of the present study. Use of e-commerce was selected as one of the dependent variable since it may be useful for policy makers in developing effective business strategies in organizations. The "reason for using e-commerce" and "reason for not using e-commerce" were expected to provide valuable information for management studies and researchers to understand professionals' attitude towards the use of online commerce and, more generally, online services. This may also be used as a basis for discussions regarding promotion of online commerce researches on groups with different natures. The justification for decision variables and corresponding hypotheses are given as follows.

Gender (x_1)

Gender has always been an important variable in analysing factors which have impact on the use of ICT and gender differences were shown to have a significant effect in some studies (Sayan et al., 2004). Association between gender and e-commerce was also investigated in the literature. For example, Ige (2004) reported that factors such as product type and gender are likely to influence purchase intention. When it comes to online

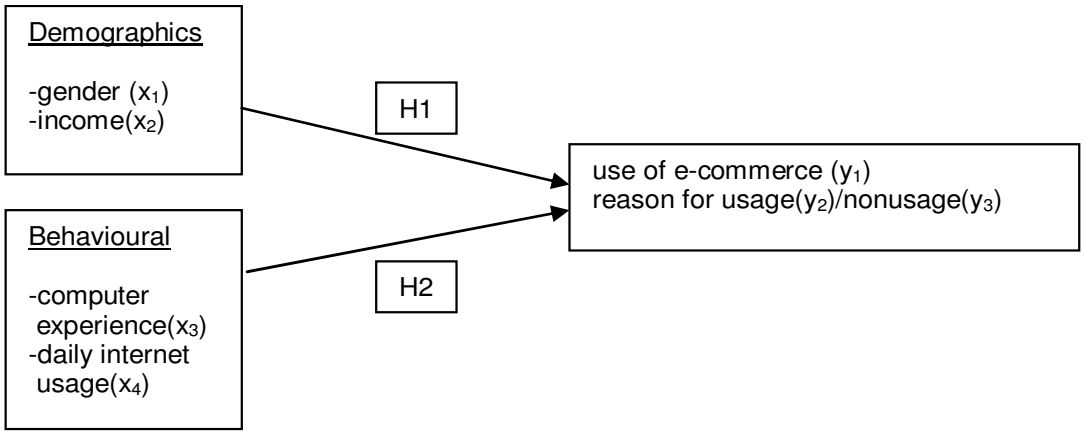

Figure 1. Research Model

shopping, women tend to be affected by more factors than are men (Yang and Lester, 2005). Yang and Lester (2005) put forward that gender differences in online shopping could be due to preferences for shopping styles or attitudes toward computers and the internet. Use of the internet has always been one of the most important indicators for e-commerce and Yang and Lester (2005) also reported the gender difference in Internet use varies from country to country. These studies, as noted before, use either academic populations or ordinary citizens and do not focus on gender differences among professionals in terms of e-commerce usage. Against this backdrop, the predictive impact of professionals' gender on their e-commerce usage is worth investigating and the authors postulate the following hypothesis:

$H1_{1i}$: x_1 does not have predictive impact on y_i, i=1,2,3.

Income (x_2)

The literature is not conclusive for the effect of income on online buying behaviour. In their article, Forsythe and Shi (2003) reported that people with high income buy more often online. This statement is supported by other studies. Wong (2003) reported that the high level of income of the Singapore population carries positive implications for e-commerce. Akhter (2003) has also supported this observation and mentioned that people with a higher income will prefer the Internet because of the time saving feature of the Internet. However, Lowe (2003) described the potential for increased access is largest among the lower income households. Shiu and Dawson (2002) examined the consumer segmentation and found that e-commerce experience is significantly different between different segments of the society and different countries in terms of income. Furthermore, according to the report by UNPAN (UNPAN, 2005) disparities in income broadly mirror disparities in ICT adoption. Against this backdrop the authors postulate the following hypothesis:

$H1_{2i}$: x_2 does not have predictive impact on y_i, i=1,2,3.

Computer experience (x_3)

Computer experience, in particular, appears to be one of the key elements for the level and purpose of usage of IT (Jaeger, 2003). Computer experienced individuals will know more about how to use ICTs and this naturally increases with the duration that they spend with the computer (Markus and Soh, 2002). In addition, practical compatibility of the user with new technology has a positive effect on its adoption (Sait et al., 2004). Furthermore, Peslak (2004) reported variations in usage of ICT among demographic groups. Therefore, factors like amount of long-term usage of computers (x_3) may enhance the adoption of e-commerce (Sait et al., 2004) and the authors suggest the following hypotheses.

$H2_{3i}$: x_3 does not have predictive impact on y_i, i=1,2,3.

Use of the internet (x_4)

The level of use of e-commerce in a country depends highly on the use of the internet and people's perceptions on using the internet are shaped by the existing value system of the society (Tigre and Dedrick, 2004). Tigre and Dedrick (2004) reported that the growth and usage of the internet has not been the same across all regions and there appears to be differences in the usage of the internet both regionally and demographically. On the other hand, Thomson and Laing (2003) pointed out that, in general, internet users are well-informed potential consumers as a variety of information is available on the web and familiarity with using the Internet has to be taken into consideration in e-commerce studies. Therefore, internet usage may be taken as an important indicator of

Table 1. Summary of Research Questions and Variables.

Ques.	Variable	Definition	Range of values
1	Gender (x_1)	Your gender	Male/Female
2	Income(x_2)	What is your monthly income?	<1500YTL, 1500-3000YTL, >3000 YTL
3	Experience (x_3)	For how many years have you used computer/IT continuously?	<5 years, 5 -10 years, >10 years
4	Daily internet usage (x_4)	What is your average daily use of the Internet?	<3 h, 3-6 h, >6 h
5	E-commerce* (y_1)	Have you ever used e-commerce?	Yes/No
6	Reason for usage** (y_2)	What are the reasons for using e-commerce?	Obligation / responsibility, safety, interest / curiosity, ease, saving money/time, gaining prestige/feeling of being different.
7	Reason for nonusage** (y_3)	What are the reasons for not using e-commerce?	Waste of time, finding instructions difficult to understand/follow, security problems, lack of experience of e-commerce, prefering conventional methods, quality is suspect with e-commerce, not having PC and/or access to the Internet .

*E-commerce is defined as distributing, buying, selling, marketing, exchanging and servicing of products or services over electronic systems such as the Internet and other computer networks with no barriers of time or distance (Turban and King, 2003).
**Respondees are asked to opt for more than one alternative if appropriate in these questions

citizens' intention of using e-commerce services and the proposed hypothesis is as follows.

$H2_{4i}$: x_4 does not have predictive impact on y_i, i=1,2,3.

RESEARCH METHODOLOGY

Research instrument

This study uses a systematic analysis to investigate the impact of socio-demographic factors on e-commerce usage among professionals. A survey approach was adopted for this purpose and the data was obtained through a questionnaire prepared in Turkey. A pilot version of the questionnaire was developed and distributed to a group of IT managers and academics to get their suggestions and clarifications. We tried to assimilate these suggestions as much as possible. The respondents were employees, who attended the annual two-day exhibition on informatics organized by the Turkish Informatics Association (TIA) and participated in this study voluntarily. A total of 230 completed survey questionnaires were received. The Research instrument contains 7 questions which involve 7 variables (Table 1).

Method of analysis

In general, the extent and the direction of the main effects of independent factors on dependent ones is conducted using either univariate or multivarite regression analysis (Milton and Arnold, 1995). Logistic regression, binary logistic regression, ordinal logistic regression and nominal logistic regression are alternatives for data with certain characteristics. Among these, bivariate ordinal logistic regression technique is used when the response variable is categorical and there is a natural ordering of the possible values. This means, bivariate ordinal logistic regression reflects the characteristics of our data best and, therefore, we prefer this technique in the analysis. We treated the problem as linear for each dependent variable as follows:

$Y1 = a_{10} + a_{11}$ gender $+ a_{12}$ income and

$Y2 = a_{20} + a_{21}$ computer experience $+ a_{22}$ daily Internet usage.

One of the principal areas of statistical inference is the test of statistical hypotheses. These tests deal with drawing inferences about population parameter on the basis of sample data drawn from population. The chi-square test (test of independence) is one of the most popular non parametric method for statistical inference and was used whenever there is a need to examine the relationship between the dependent and the independent variables in this study (David et al., 2005).

RESULTS

Descriptive results

The male respondents were observed to be dominant (69.57%) in this survey (Table 2). This is to be expected because it is generally observed in society that the majority of professionals working in the field of IT are males. This observation is especially true for rural areas. Of the males, 72.15% conducted e-commerce and the corresponding percentage for females was 53.85%. However, the difference between the genders' use of e-commerce was not found to be significant (χ^2= 0.004, df=1, p-value=0.947). The income distribution showed a high percentage for the group of <1.500 YTL (70.00%). This is not surprising since the majority of respondents were from public sector organizations (58.70%) and the salary standard in the public sector are lower than those of the private sector in Turkey. The computer experience

Table 2. Profile of respondents.

Variable	Number	Percentage
Gender		
Male	160	69.57
Female	70	30.43
Income (in YTL) (YTL=1.5 US$)		
< 1.500	161	70.00
1.500-3.000	47	20.43
>3.000	18	7.83
No response	4	1.74
Experience (number of years of using computers/IT continuously)		
< 5	62	26.96
5 -10	102	44.35
> 10	58	25.22
No response	8	3.48
Have you ever used e-commerce via Internet		
Yes	143	62.17
No	46	20.00
No response	41	17.83
The sector of your organization		
Public	135	58.70
Private	95	41.30

of respondents was clustered around 5 -10 years (44.35%) and the average experience was 6.67 years. Finally, it was interesting to observe that most of the respondents reported that they used e-commerce (62.17%).

Test results

The results of ordinal logistic regression model are summarized in Table 3.

Usage of e-commerce

Interestingly, based on ordinal logistic regression results $H1_{11}$ is accepted (alpha-value = -0.021, p-value = 0.772). In other words, on the contrary to what is expected, there is no predictive effect of professionals' gender on e-commerce usage, which also means there is no disparity in "gender" in terms of employees' e-commerce usage. Similarly, test results are in favor of the hypotheses $H2_{31}$ and $H2_{41}$ (alpha-value = -0,030, p-value = 0.456 and alpha-value = -0,031, p-value = 0.401 respectively) and, therefore, leads to the acceptance of $H2_{31}$ and $H2_{41}$. This also means employees' computer experience and average daily use of internet do not have significant predictive impact on their e-commerce usage.

The corresponding results of ordinal regression for the variable income is statistically significant (alpha-value = 0.141, p-value = 0.003) for employees' e-commerce usage. This means, $H1_{21}$ is rejected and may, therefore, be interpreted as income has statistically significant predictive impact on employees' e-commerce usage.

Reason for using e-commerce

Surprisingly, the test results lead to acceptance of both $H1_{12}$ and $H1_{22}$ (alpha-value = -2.530, p-value = 0.124 and alpha-value = -2.400, p-value = 0.826 respectively), which indicate that gender and income do not have statistically significant predictive effect on professionals' reason for e-commerce usage. This also means that gender and income cannot be used to explain the reason for professionals' e-commerce usage. On the other hand, inspection of p-values for behavioural variables indicated that there is sufficient evidence to reject $H2_{32}$ and $H2_{32}$ (alpha-value = 1.914, p-value = 0.032 and alpha-value = 1.866, p-value = 0.022) in this category. In other words, computer experience and average daily use of the internet have significant predictive impact on the reason

Table 3. Bivariate ordinal logistic regression results.

Dependent variable	Independent variable.	Hyp.	Coeff.	p-value*
E-commerce (y_1)	Gender (x_1)	$H1_{11}$	-0.021	0.772
	Income(x_2)	$H1_{21}$	-0.141	0.003*
	Computer eperience(x_3)	$H2_{31}$	-0.030	0.456
	Daily iternet usage (x_4)	$H2_{41}$	0.031	0.401
Reason for usage (y_2)	Gender (x_1)	$H1_{12}$	-2.530	0.124
	Income(x_2)	$H1_{22}$	-2.400	0.826
	Computer eperience (x_3)	$H2_{32}$	1.914	0.032*
	Daily Internet usage (x_4)	$H2_{42}$	1.866	0.022*
Reason for nonusage (y_3)	Gender (x_1)	$H1_{13}$	-1.023	0.599
	Income(x_2)	$H1_{23}$	-3.972	0.015*
	Computer eperience (x_3)	$H2_{33}$	- 7.251	0.513
	Daily iternet usage (x_4)	$H2_{43}$	1.775	0.077

*indicates statistically significant at 5% significance level.

for using e-commerce. This can also be interpreted as computer experience and average daily use of the internet constitutes two significant reasons for professionals' e-commence usage.

Reason for not using e-commerce

The inspection of p-values in Table 3 indicated that except for hypotheses $H1_{23}$, all the remaining ones were supported by the survey results. This means, there is sufficient evidence to

1. Accept the hypotheses $H1_{13}$ that gender does not have predictive effect on the reason for not using e-commerce (alpha-value = -1.023, p-value = 0.599).
2. Accept the hypotheses $H2_{33}$ that computer experience does not have predictive effect on on the reason for not using e-commerce (alpha-value=-7.251, p-value=0.513).
3. Accept the hypotheses $H2_{43}$ that average daily use of the Internet does not have predictive on the reason for not using e-commerce (alpha-value=1.775, p-value=0.077).

In other words, the only factor that has statistically significant predictive impact on the reason for not using e-commerce is income (alpha-value = -3.972, p-value = 0.015). This can also be interpreted as income is a significant factor in explaining professionals' non-usage of e-commerce.

DISCUSSİON

Usage of e-Commerce

This study reveals that 72.15% of the male professionals and 53.85% of the female professionals used e-commerce. Although this gap between these groups is in parallel (62.24% for males and 55.32% for females) to that reported for by Turkstat (2007) we did not find it to be significant (χ^2 = 0.004, df = 1, p-value = 0.947). Surprisingly, gender also does not have predictive effect on Internet usage. One plausible explanation for these results may be that respondents having similar backgrounds are likely to show similar attitudes and behaviour in using ICT. Our finding is supported by Husing and Selhofer (2002) who found "gender divide" in using the Internet is closing nearly in all member states of EU and to that reported by (Levy, 2002) who concluded that disparity in Internet usage between men and women has largely disappeared. Koyuncu and Lien (2003) and Hwang et al. (2006) are amongst the researchers who reported contradictory findings. Koyuncu and Lien (2003) concluded that gender has a significant effect on online commerce. Hwang et al. (2006) pointed out significant group differences for gender. A possible explanation for the contradictory findings may be based on the regional differences. In other words, regional culture influence preferences and there are differences among different cultures from the HCI (Human Computer Interface) point of view (Cagiltay, 1999). Cagiltay (1999) also concluded that emotions can vary depending on context, content and the recipient of an on-line communication.

Prior literature on the influence of income on e-commerce usage produced conflicting results. For instance, Donthus and Garcia (1999) did not find any significant difference between Internet shoppers and non-Internet shoppers in terms of price consciousness. The reason for the lack of price consciousness was attributed to the former group's above-average socioeconomic status. Forsythe and Shi (2003) reported people with a high income buy online more often. As expected, we

found that professionals' income is significantly associated with e-commerce usage and the percentage for the higher income group (income > 3000 YTL) (90%) is higher than the lower income group (income <=3000 YTL) group (76.65%) in terms of use of e-commerce. Moreover, test results indicated a significant difference between income groups in terms of use of e-commerce (χ^2 = 9.984, df = 2, p-value = 0.007). This is not surprising because Turkey is the most expensive (US$ 81.13) country amongst the OECD countries in terms of broadband Internet services (Haber3, 2007) and use of the Internet brings an important load on the budget of lower income groups. Our finding is supported by Farag et al. (2006) in that the higher income respondents are more likely to buy online. Koyuncu and Lien (2003) has also found as income increases, the individual is more likely to shop online. Hwang et al. (2006) indicated that economic factors which influence online commerce include income level. As stated before, our respondents were from either public or private sector organizations and individuals with a higher income are influenced by the economic benefits that they gain as a result of their online commerce.

The present study defines professionals' computer experience as the number of years of using computers/ IT. Our study found professionals' computer experience does not have statistically predictive effect on the use of e-commerce. We observed diversity in the distribution of computer experience and chi-square test results indicated significant difference between different levels of experience for e-commerce usage (χ^2 = 6.600, df = 2, p-value = 0.037). Lightner et al. (2002), Chow and O (2006) are supporters of this result. They pointed to a significant difference between levels of computer experience for e-commerce usage. Sayan et al. (2004) found in their study that the Internet is the basic platform for transaction of e-commerce and Turkey experienced impressive rates of increase in Internet penetration from 0.1 to 7% (Hwang et al., 2006). When studying commerce via the Internet attitude, the familiarity of each user towards using the Internet has to be taken into consideration since the Internet has helped in the proliferation of e-commerce. Surprisingly, in our study, the variable Internet (number of hours spent with the Internet) was not found to be significantly associated with usage of e-commerce. Similarly, chi-square test results did not show any significant difference for the variable average daily use of the Internet (χ^2 = 3.691, df = 2, p-value = 0.158). These findings may be explained by the fact that, according to the information taken from OECD-2006 report, the Internet connection is slow when compared to the developed countries (Haber3, 2007) and security is still suspect for most Internet users in the country (Turkstat, 2007). Another explanation may be based on the fact that Internet users prefer to use on-line communication (Akman et al., 2005), on-line games and Internet surfing more than other activities (Punamaki et al., 2007).

Reasons for usage/nonusage

It was observed that differences exist between respondents on whether they used e-commerce or not. Therefore, those who used e-commerce and who did not were considered separately in terms of their reasons. Interestingly, the test results for the reason for usage and nonusage grouped the variables in two mutually exclusive classes. The behavioural variables, namely, computer experience and average daily use of the internet were both found to be significant in explaining the reason for using e-commerce whereas only the socio-demographic factor income was found to be significant in explaining the reason for nonusage. Interestingly, gender was not found significant in any group of tests.

In this study, the highest percentage (75.93%) for the reason of not using e-commerce was obtained for "security problems". This may be due to:

1. Worry about the ability to get a warranty or refund from a 'virtual' retailer,
2. Concern about delivery aspects (damaged goods, delay, and actual failure to deliver),
3. Credibility of the information on the Internet,
4. News of virtual crimes on the Internet,
5. Customers who prefer conventional shopping see the seller and this make them uncomfortable with the Internet,
7. Electronic signature has not been fully understood and used in the country.

Special Eurobarometer (2004) reported similar results for EU countries. According to this report, for those consumers who had not purchased on the internet and who did not trust the medium, the prime reason for not trusting the Internet was security of payment. In this report, three-quarters (73%) of the group gave this reason. Interestingly, this security of payment issue was also the factor that gave most concern to those who had actually purchased something on the Internet and even amongst this 'more positive' group the figure was 48%. This reason is also supported by some other studies (Wymer and Regan, 2005; Lightner et al., 2002; Delio, 2001). According to Lightner et al. (2002), of those respondents that had never shopped online, 83% indicated that the reason was that they do not trust shopping on the Web. Wymer and Regan (2005) considered 26 factors and reported that security has the highest priority for those who do not adopt e-business and e-commerce information technology (EEIT). Delio (2001) also pointed out that many users think that consumer records and sensitive data are not properly protected on a significant number of websites. And they believe that the situation will not improve until e-commerce sites bolster security by ensuring that all transmitted and stored data is being securely encrypted, and skilled administrators are hired to configure and

maintain software and networks. “Not having enough computer experience for e-commerce activities” received the second highest priority (68.51%) followed by “prefering conventional methods” (62.96%). The Economy of Gloucestershire (2006) and Koyuncu and Lien (2003) are supporters of our finding. The former reported that the major causes of non-usage were a lack of awareness of these services and confusion over service provision.

The latter stated that people with more online experience are likely to order more from the Internet since they may know how to get to the right website in a short period of time in a more efficient way. Similarly, 45% of our respondents found not easy to understand e-commerce. Finally, privacy was reported to discourage online purchases and individuals concerned that their personal information may be insecure tend to shop less from the Internet (Koyuncu and Lien, 2003). Special Eurobarometer (2004) reported that lack of understanding of the language was a problem only for a very small number (2%) of EU-15 consumers who had never bought anything. This figure is as high as 45% for respondents who reported some difficulty in understanding instructions and messages in our study. Regarding the reason for using e-commerce, the highest and second highest priorities go to ease of e-commerce (26%) and saving money and time (23%). This should be expected in our study since the respondents are employees from government and private sector organi-zations and they are likely to use ICT more effectively. Our finding is consistent with that reported by Special Eurobarometer (2004). In this report, the ease of making comparisons between various e-commerce providers was cited as an important reason reason for purchasing on the internet by more than one in three (38%) of EU citizens who had purchased using the Internet. Besides, consumers who had shopped on the Web claimed that they used this method of purchase was because it made it unnecessary to go to the shop or service provider (37%) (Special Eurobarometer, 2004). Koyuncu and Lien (2003), and Webmetro (1998) also concluded that ease of product reviews, taxation, saving money and time have a significant influence on the decision to use e-commerce.

The two major reasons supported by virtually half of those who had bought something on the Internet were reported to be convenience and cost for EU consumers (Special Eurobarameter, 2004). 48% of EU citizens who had bought over the Internet indicated convenience as the main reason for using e-commerce. This was particularly strongly felt by Swedes (62%), Finns (60%) and Germans (58%). These figures are consistent with with ours and, of the e-commerce users, 65% are using e-commerce for convenience in Turkey. Cost ranks just behind convenience as a reason for buying on the Internet with a support level of 47% amongst EU consumers. Cost has relatively low priority for Finns, and Belgians with only 13 and 20% respectively (Special Eurobarameter, 2004). However, we found that 59% of e-commerce users prefer it for saving time and money.

Naturaly, Turkish people give higher priority to their economy when their income levels (and hence living standards) are compared to EU countries. Interestingly, for 37% of e-commerce users, the reason was reported to be the interest and curiosity in our survey. This may be due to the fact that most of our respondents are young (<30 years of age) and younger groups are more enthusiastic in using new technologies (Saarenpää and Tarja, 2005; Akhter, 2003). Apart from all, probably the most interesting finding in our survey is that 53.5% are involved in e-commerce related activities because they think they are different from others (gaining prestige or social status more high).

Conclusion

This paper investigates the use of e-commerce in Turkey. It is the first of its own kind of study that directly analyses the predictive impact of socio-demographic and behavioural factors on e-commerce attitudes of a specifically Turkish population. A survey research approach was adopted for the data collected from a sample of individuals from the government and private sectors. To keep in line with the available literature, selected factors included socio-demographic (gender and income) and behavioural (computer experience and average daily use of the Internet) variables. Observations have shown that Internet use in Turkey is growing rapidly, despite a low penetration rate (7%). According to the comparative analysis, the use of e-commerce is significantly associated with income. However, descriptive results have also shown that e-commerce implementations and related activities are not systematic and mature yet. The computer experience and average daily use of the internet are significantly associated with the reason for users, whereas income is significant for explaining the reason for nonusers. The analyses have shown that, although Turkey is a developing country with good potential, it is at an early stage in the process of the adoption of e-commerce. We hope this study will enhance the readers and his professionals understanding about Turkish e-commerce users and start a discussion that will help guide IS practitioners as they develop effective strategies and tactics to penetrate the highly competitive cyber-markets.

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