

## Physical Education and Sports of High School Students' Habits of Shopping on Facebook

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### ABSTRACT

Originally intended to serve as a social communication tool, Facebook now offers a variety of services for its users. One of these services is online shopping that we can consider within the framework of social trade concept. These social networks are used for marketing purposes in sports sector and Facebook as one of these social networks enables its users to do online shopping and plays an important role in sports marketing. The study mainly aims at identifying the opinions of Turkish SPTS (physical education and sports of high school) students in their habits of online shopping via Facebook and examining whether these opinions vary according to demographic variables. In this regard, a questionnaire with 3 sections and 34 questions in total was administrated to 788 participants. Following the survey, it was found that majority of the participants use Facebook and their habits of online shopping on Facebook are particularly high. It was also found that students use Facebook more often, and this habit is higher in those with higher education (university and above) than those with lower education. Participants access companies, receive information about products and services, and do shopping via Facebook. Moreover, it was concluded that income status, educational status, age, gender, internet usage level (Facebook) and job status (occupation) were related to users' perception of advertisement and their purchasing.

**KEYWORDS:** Social network, facebook, online shopping, social trade

### INTRODUCTION

Having the most common area of usage among information and communication technologies, internet has resulted in significant changes in daily economic activities. Effective use of information and communication technologies has become one of the most important conditions for being an information community. Wide use of internet in various economic fields has raised life quality of individuals, changing substantially consumers' behaviors, habits and shopping styles [1].

Especially changes in consumer behaviors, a large portion of daily life spent on working, stressful working atmosphere, and desire to spend time with family and friends cause individuals to spend less time on shopping and ultimately to do shopping from internet [2]. While Turkey leaves behind some European countries in terms of internet use, it ranks lower in electronic shopping [3].

There are many sites available that allow for electronic shopping and are used commonly. However, social networking sites that are originally established for a different purpose and likely to be the mostly used area of internet now offer electronic shopping to their users. Being more of a socializing agent (finding friends), social networking has become platforms that enable users to share information, use hundreds of applications and develop their own applications.

Thanks to social networking, individuals can communicate with other individuals and groups with common areas of interest, and they can share resources and experiences [4, 5]. Using social networking can vary according to the characteristics of individuals [6]. It is seen that many people use these platforms not only for recreation and sharing purposes, but also for business and advertisement [7].

Social networking represents a structure in which individuals are connected to each other for various relationships. Although connections within the system are usually based on friendship, it can also be based on finance and trade [8].

As of 2007, with Marketplace application, Facebook has created a marketing platform including goods for sale, houses for rent/sale, services and others, and it has enabled users to trade with each other. Many students sell their books and stationery through Facebook. In addition, apartments and houses for rent are put into market

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via Facebook [9]. Ever increasing number of online ‘storefront’ applications makes Facebook an online shopping mall. The reason why such a sales system is called ‘storefront’ is that sale is not done on the fun page of the company, but on a site to which the user is directed. In a sense, companies use fun pages as display, seeking to attract customers [10]. Given that most of Facebook users are between 18-25 [11], the important of the emerging market can be understood more. Facebook now has become a social networking site that is emerging fastest and preferred mostly among university students [12]. It is known that customers’ attitudes toward online shopping are the main factor that impacts the potential of electronic shopping. A better understanding of customers’ attitudes will help marketing managers to determine online shopping rate and evaluate the future of growth in online trade [13].

Given young population in ever-changing and -growing competitive market, the share of university students in electronic shopping is an issue that should not be neglected by enterprises and brands in online market. The aim of users in using social networking sites can vary. Such difference can also be true for shopping. Shopping preferences of university students attending different department can be different. To illustrate, product preferences of students at the faculty of medicine can be different from those of students at textile, architecture, fine arts and SPTS, etc. Especially in the field of sports as an ever-emerging sector, online platforms offer numerous sopping opportunities to its users. Investigating the online shopping habits of students who attend SPTSSs at different universities in Turkey in terms of sports industry and market can be directive in attracting these students to online shopping platforms. However, shopping interests, habits and drawbacks of the population desired to be reached should be determined to attract them to online marketing.

In this study, the aim is to determine the opinions of university students attending SPTS on electronic shopping habits. Research on limited related studies in the literature from different aspects can offer various approaches for sports as an ever-growing field, social networking and online shopping platform.

### **Social networking**

With technological developments, social networks can be defined as platforms in which people come together, share personal information, and do shopping [14]. Although their categories and intended use are different, social networks have moved individuals’ real social communication, work and even learning process into an online platform and reshaped them. Though not completely as real life, social networks have become a part of it [15, 16].

Underlying the developments in social networking sites (Twitter, Facebook, LinkedIn, Myspace, etc.) as new media technologies, Ward [17] notes that via social networks, people share their common interests and activities, communicate online with millions of people, and so transmit information accordingly [14].

Social networking sites can be described as social structures related to individuals’ common interest, purpose, admiration, belief, knowledge and so on. Such relations can be made by many factors from friendship to trade, education to recreation including kinship, trade, potential customers and business [18].

Social networks have some characteristics. Özkan and McKenzie [19] summarize the characteristics of social networks as follows:

- Most of the social networks facilitate interaction by providing various services including e-mail, chat, video, blogging, file sharing and so on.
- Social networks record the data of users, and so individuals can find their friends easily and share with many people.
- Social networks enable users to create their own online profile and social network.
- Social networks allow users to edit their own access and privacy rules.

Facebook is one of the social networking sites that has grown recently in the world and has a wide range of members. Facebook is preferred by young people and most of the people sign up to find their friends [8]. Developed by Harvard University students in 2004, Facebook spread comprehensively within a short time and has become a social networking sites used all around the world [18]. Statistics indicate that Facebook has 970 million users in total around the world by 2012 [20]. By 2013, the number of active users is over 1 million [21].

Research on Facebook users emphasizes a common point in the usage habits of its users. This research indicates that Facebook is mostly used to search friends and communicate. Below are some of such research studies.

In a study on Facebook social networking site was made by Ellison et al. [22] in Michigan State University. It was found that reasons for signing up on Facebook were to inform high school friends, communicate with college friends, and so on [8].

In their study, Kobak and Biçer [8] found that Facebook is used more by young people, and the first preference is to find friends (32%).

Govani and Pashley [23] found that 85% of the participants signed up to find friends.

Ellison et al. [22] found that among the reasons for signing up, “to maintain relationships with old friends” came first.

As Kim, Jeong and Lee [24] noted, millions of internet users use social networking sites to communicate with their friends, find new friends, and share the content, photos and videos they create.

### **Facebook Use in Turkey**

Today, millions of internet users use thousands of websites with social content in order to find their old friends, find new friends, and share many events and materials such as video, photos, etc [24].

Social networks are a communication system that allows people to publish their private life [25]. In social networks, people can meet and communicate with each other, share contents, and create discussion platforms and groups [26].

It is seen that socialization in online platforms has increased particularly among young people recently. Millions of people use actively these social networking sites around the world.

Social networking sites used widely in the world have also become popular in Turkey in recent years. Reaching over 500 million users by June 2011, Facebook is used by over 20 million people in Turkey, which ranks 5th around the world. According to Socialbakers statistics (2011), 33% of Facebook users in Turkey are between 18-24. This age group includes young people with higher education in Turkey [11]. In January 2012, the number of Facebook users is approximately 31 million, and 34% of the users are between 18-24 [27]. According to Social Bakers Social Media Report in January 2013, the number of users in Turkey has reached 32 million [28].

### **Social Networking Sites in Marketing**

Social sharing and personal information plays a significant role in providing financial support to commercial activities [29]. Social networking sites have become a mostly preferred communication method in recent years [30]. Beyond being a communication network, social networking sites offer various opportunities to their users.

In recent years, websites have been used as an important tool for product promotion and sale. Social networking sites serve as tools, helping social and economic networks to strengthen. Such sites are one of the most significant means of marketing the product in media. Thus Consumers can come together to evaluate the product and brand, which can affect particularly popularity of the product [31, 32].

Having many functions, social networking sites play a significant role as marketing agent. Interpersonal relations are strengthened in such sites that offer a wide online platform [33]. Thanks to social networking sites, consumers follow easily technological innovations and changes, identify their needs, make purchasing decisions, and do brand preferences [34]. As one these social networking sites, Facebook offers online shopping opportunities to its users. Additionally, there are various applications to direct users to online shopping. One of such applications is PayPal game application. Via this application, Facebook offers international shopping experience to users.

Developed to make a difference in trans-border shopping, this application intends to facilitate international online shopping [35].

A new tool developed again by a company called Big Commerce that offers e-trade solutions provides display for firms to promote their products in Facebook pages. Through this application, users can do shopping and share their products with friends [10].

Social networking sites have also an effective platform used in the field of sports. Sports events that attract people from all segments can be reached to a wide range of population via such networks. Ever-increasing social networking sites such as Facebook and Twitter come first among platforms used widely to spread sports news [36].

However, many sports organizations use online marketing methods to increase their income. Social networking sites have been used more widely in sports sector for marketing purposes [36]. As one of the social networking sites, Facebook allows its user to do shopping via Facebook, which plays a significant role in sports marketing. It is clear that Facebook, which has over 1 billion users around the world, will be an indispensable factor in marketing sports products in a competitive platform.

In today's world where social trade concept has emerged in online platform, online shopping habits, interests and personal characteristics of Facebook users can be investigated to offer more appropriate, reliable and comprehensive shopping opportunities. It can be said that students attending different SPTS departments in higher education forms a considerable population in Turkey. When the profile of Facebook users is analyzed, it is seen that users are at an age group corresponding to the period of higher education, and that the number of users demonstrates an increasing trend, which becomes a significant factor in marketing sports products. Thus, it can be argued that investigating the opinions of SPTS students on shopping habits via Facebook will contribute a different aspect to the issue.

## MATERIALS AND METHODS

In this study, the habits of SPTS (physical education and sports of high school) students in shopping via Facebook were investigated. In this regard, a questionnaire with three sections and 34 questions in total was administrated to 788 participants. In the first section with one question, Facebook login frequency of the participants was asked. The questionnaire was continued with participants using Facebook, and through 28 items, participants' opinions on Facebook and shopping, advertisement, etc. via Facebook were asked. In the third and final section; as demographic variables age, gender, educational status, occupation and income level of participants were asked using a classifier scale. It was determined whether the demographic features of Facebook differ according to demographic variables. Cronbach's alpha analysis was used to test the reliability of the scale with 28 items. As a result of the reliability analysis made, 0.960 coefficient was found.

### **Data Analysis**

Data set obtained as a result of the questionnaire was analyzed in PASW Statistic 18 (SPSS-Statistical Package for Social Sciences) package program. Although that this study was made in Germany would make it easier to use SPSS-Statistics program IBM SPSS-Statistics Premium 18, English version was preferred to use an international language in statistics studies. During analysis; reliability analysis, frequency tables, descriptive statistics, independent sampling T-test, one-way variance analysis and Tukey tests were used.

## RESULTS

According to the demographic findings of participants, 68% is male and 32% is female. Most of the participants (76%) are between 18-24, 81% has an education at undergraduate level and 17% at graduate level. Majority of the participants (94%) are students. When income level of participants is analyzed, it is seen that a large majority (68%) has a low income (below 1000 liras).

In the study, to the question "How often do you login Facebook?", participants with a rate 87.5% stated that they login at least once a day. The rate of those who rarely login is 2.4%.

**Table 1: Distribution of Participants' Opinion on Facebook**

	Strongly Disagree	Disagree	Hesitant	Agree	Strongly Agree	B2B	T2B	X	S.S.
I follow Facebook pages of the firms of which I am a customer.	20%	5%	12%	50%	14%	25%	63%	3,327	1,336
I follow Facebook pages of the firms of which I may be a customer.	18%	8%	19%	41%	14%	26%	55%	3,242	1,306
I follow Facebook pages of the firms that my friends like.	13%	16%	38%	24%	8%	29%	32%	2,985	1,117
I receive information from Facebook page of a firm about their products or services.	15%	7%	15%	40%	22%	23%	62%	3,463	1,334
I attend the events on Facebook pages of firms that they organize for product development.	21%	20%	16%	33%	10%	40%	43%	2,921	1,330
I comment on, like and share with my friends the products of firms on their Facebook pages.	16%	17%	28%	26%	12%	33%	38%	3,006	1,257
I am interested in products that my friends like, comment on, or share on Facebook.	12%	7%	31%	35%	14%	20%	49%	3,310	1,177
I receive information about the prices of products on Facebook pages of firms.	22%	11%	13%	38%	16%	33%	54%	3,162	1,408
I follow Facebook pages of firms to be informed about sales.	19%	11%	20%	39%	11%	30%	51%	3,133	1,298
I think products on Facebook pages of firms are cheaper.	22%	15%	14%	37%	12%	37%	49%	3,028	1,371
I review the products and prices on Facebook pages of firms before purchasing.	21%	25%	19%	26%	9%	46%	35%	2,769	1,287
I think purchasing a product from Facebook pages of firms or sites that their Facebook page directs is safe.	3%	3%	2%	51%	40%	6%	91%	4,213	0,895
I think purchasing a product from Facebook pages of firms or sites that their Facebook page directs is more practical.	16%	14%	21%	34%	14%	30%	48%	3,162	1,287
I use online services on Facebook pages of firms.	22%	10%	26%	29%	13%	31%	42%	3,018	1,329
I am interested in advertisements that I see on Facebook.	11%	17%	21%	28%	23%	28%	51%	3,354	1,297
I like, comment on, or share with my friends the advertisements that I see on Facebook.	20%	17%	16%	38%	9%	37%	46%	2,980	1,307
I am interested in advertisements that my friends like, comment on, or share on Facebook.	14%	18%	13%	43%	13%	31%	56%	3,234	1,268

<b>I am informed about many new firms thanks to Facebook advertisements.</b>	13%	15%	31%	31%	10%	28%	41%	3,088	1,167
<b>I purchase through advertisements I see on Facebook.</b>	4%	4%	4%	46%	42%	7%	88%	4,187	0,962
<b>I purchase through discount vouchers of firms on Facebook.</b>	5%	5%	2%	51%	36%	11%	87%	4,071	1,040
<b>I prefer Facebook pages to contact with firms.</b>	16%	30%	25%	17%	13%	46%	29%	2,803	1,253
<b>I comment my positive or negative opinions on Facebook pages of firms about them or their products.</b>	17%	16%	22%	32%	13%	34%	45%	3,065	1,296
<b>I think I will receive a quicker reply to the comments or questions I make on Facebook pages of firms.</b>	27%	12%	18%	32%	11%	39%	43%	2,871	1,390
<b>I prefer Facebook pages of firms to contact with other customers.</b>	18%	13%	23%	27%	19%	31%	46%	3,160	1,364
<b>I receive accurate information about a firm through its Facebook page.</b>	20%	10%	29%	28%	12%	30%	41%	3,028	1,299
<b>I purchase more from a firm when I like its Facebook page.</b>	21%	10%	32%	26%	11%	31%	37%	2,963	1,280
<b>When I like Facebook page of a firm, I suggest it to my friends whom I think will be interested.</b>	20%	19%	21%	32%	7%	39%	40%	2,885	1,264
<b>I think activities of firms on their Facebook pages are sufficient.</b>	35%	11%	22%	17%	14%	47%	31%	2,628	1,458

**Table 2: Anova Test on “Educational Status” and Facebook Shopping of Participants**

		Sum of Squares	Df	Mean of Squares	F	Sig.
<b>I purchase through advertisements I see on Facebook.</b>	Inter-groups	64,608	4	16,152	19,08	0,000
	Intra-group	662,969	783	0,847		
	Total	727,577	787			
<b>I purchase through discount vouchers of firms on Facebook.</b>	Inter-groups	70,029	4	17,507	17,53	0,000
	Intra-group	781,992	783	0,999		
	Total	852,02	787			

For both lines, Sig is (0,000)<0,05. It is seen that education results in difference on those who purchase and use discount vouchers through Facebook pages of firms.

It is seen that those with an undergraduate, graduate and post-graduate education level differ from those with lower education levels (Sig<0,05). According to multiple comparison analysis, those with undergraduate and above education level have a higher mean than those with lower education levels.

**Table 3: Anova Test on “Job Status (Occupation)” and Facebook Shopping of Participants**

		Sum of Squares	df	Mean of Squares	F	Sig.
<b>I purchase through advertisements I see on Facebook.</b>	Inter-groups	286,179	3	95,393	169,434	,000
	Intra-group	441,399	784	,563		
	Total	727,577	787			
<b>I purchase through discount vouchers of firms on Facebook.</b>	Inter-groups	280,512	3	93,504	128,270	,000
	Intra-group	571,508	784	,729		
	Total	852,020	787			

For both lines, Sig is (0,000)<0,05. It is seen that job status results in difference on those who purchase and use discount vouchers through Facebook pages of firms. According to multiple comparison analysis, shopping mean of students differ from that of other groups and is particularly higher.

**Table 4: Anova Test on “Educational Status” and Advertisement Perception of Participants**

		Sum of Squares	df	Mean of Squares	F	Sig.
<b>I am interested in advertisements that I see on Facebook.</b>	Inter-groups	330,486	4	82,622	65,1	0,00
	Intra-group	993,731	783	1,269		
	Total	1324,217	787			
<b>I like, comment on, or share with my friends the advertisements that I see on Facebook.</b>	Inter-groups	226,266	4	56,566	39,64	0,00
	Intra-group	1117,409	783	1,427		
	Total	1343,675	787			

<b>I am interested in advertisements that my friends like, comment on, or share on Facebook.</b>	Inter-groups	167,249	4	41,812	29,82	0,00
	Intra-group	1097,787	783	1,402		
	Total	1265,036	787			
<b>I am informed about many new firms thanks to Facebook advertisements.</b>	Inter-groups	176,617	4	44,154	38,66	0,00
	Intra-group	894,341	783	1,142		
	Total	1070,958	787			

When Sig values of all items are analyzed, it is seen that all is below 0,05. Therefore, it is seen that education results in difference in all items. According to multiple comparison analysis, those with undergraduate and above education level differ in terms of advertisement perception from those with lower education levels.

**Table 5: Anova Test on “Job Status (Occupation)” and Facebook Login Period of Participants**

How often do you login Facebook?	Sum of Squares	df	Mean of Squares	F	Sig.
<b>Inter-groups</b>	136,665	3	45,555	58,8	0,00
<b>Intra-group</b>	607,359	784	0,775		
<b>Total</b>	744,024	787			

When Sig value is analyzed, it is seen that it is below 0,05. Therefore, it can be said that occupation results in difference in Facebook login period. According to the results of multiple comparison analysis, students differ from professionals.

**Table 6: Anova Test on the Relationship Between “Job Status (Occupation)” and Internet Security Systems**

I think purchasing a product from Facebook pages of firms or sites that their Facebook page directs is safe.	Sum of Squares	Df	Mean of Squares	F	Sig.
<b>Inter-groups</b>	254,807	3	84,936	177,395	,000
<b>Intra-group</b>	375,376	784	,479		
<b>Total</b>	630,183	787			

Sig is <0,05. Therefore, occupation results in difference on trust in internet shopping. According to multiple comparison analysis, students differ from other professionals.

**Table 7: Anova Test on “Educational Status” and Shopping with Respect to Facebook Page of Participants**

I purchase more from a firm when I like its Facebook page.	Sum of Squares	Df	Mean of Squares	F	Sig.
<b>Inter-groups</b>	95,279	4	23,82	15,61	0,000
<b>Intra-group</b>	1194,654	783	1,526		
<b>Total</b>	1289,933	787			

Education becomes an effective factor on shopping with respect to Facebook page (loyalty). According to the results of multiple comparison analysis, those with undergraduate and above education level differ from others.

**Table 8: Anova Test on “Job Status (Occupation)” and Shopping with Respect to Facebook Page of Participants**

I purchase more from a firm when I like its Facebook page.	Sum of Squares	df	Mean of Squares	F	Sig.
<b>Inter-groups</b>	1,456	3	0,485	0,295	0,83
<b>Intra-group</b>	1288,477	784	1,643		
<b>Total</b>	1289,933	787			

As Sig value is lower than 0,05, occupation is not an effective factor on shopping with respect to Facebook page (loyalty).

**Table 9: Anova Test on “Educational Status” and Facebook Opinions of Participants**

		Sum of Squares	df	Mean of Squares	F	Sig.
<b>I follow Facebook pages of firms to be informed about sales</b>	Inter-groups	160,546	4	40,136	26,99	0,000
	Intra-group	1164,463	783	1,487		
	Total	1325,009	787			
<b>I think products on Facebook pages of firms are cheaper.</b>	Inter-groups	218,804	4	54,701	33,98	0,000
	Intra-group	1260,582	783	1,61		
	Total	1479,386	787			
<b>I review the products and prices on Facebook pages of firms before purchasing.</b>	Inter-groups	115,683	4	28,921	19,06	0,000
	Intra-group	1188,282	783	1,518		
	Total	1303,964	787			
<b>I purchase through discount vouchers of firms on Facebook.</b>	Inter-groups	70,029	4	17,507	17,53	0,000
	Intra-group	781,992	783	0,999		
	Total	852,02	787			

Sig is (0,00)<0,05. Educational status is an effective factor on following Facebook pages for sales. According to multiple comparison analysis, those with undergraduate and above education level differ from other groups.

Sig is found (0,00)<0,05. Education is an effective factor on thinking that products on Facebook pages are cheaper. According to multiple comparison analysis, those with undergraduate and above education level differ from other groups.

Sig is found (0,00)<0,05. Educational status is an effective factor on reviewing products and prices on Facebook pages before purchasing. According to multiple comparison analysis, those with undergraduate and above education level differ from other groups.

Sig is found (0,00)<0,05. Educational status is an effective factor in habits of shopping by using discount vouchers on Facebook pages. According to multiple comparison analysis, those with undergraduate and above education level differ from other groups.

**Table 10: Paired T-Test on “Income Level” with Advertisement Perception and Purchasing of Participants**

	Paired Differences					T	df	Sig. (2-tailed)			
	X	Standard deviation	Standard error	95% Confidence Interval of the Difference							
				Lower	Upper						
<b>I purchase through advertisements I see on Facebook. - Monthly income level</b>	2,543	1,770	,063	2,419	2,667	40,334	787	,000			

**H1:** There is a positive or negative relationship between income and shopping.

**H0:** Income level factor and shopping attitude factor are not related with each other.

As Sig (0,000) value is below 0,05, H0 is rejected. Income level factor and shopping attitude factor are related with each other.

**Table 11: Paired T-Test on “Educational Status” with Advertisement Perception and Purchasing of Participants**

	Paired Differences					T	df	Sig. (2-tailed)			
	X	Standard deviation	Standard error	95% Confidence Interval of the Difference							
				Lower	Upper						
<b>I purchase through advertisements I see on Facebook. - Educational Status</b>	,981	1,075	,038	,906	1,056	25,627	787	,000			

**H1:** There is a positive or negative relationship between education and shopping.

**H0:** Educational status factor and shopping attitude factor are not related with each other.

As Sig (0,000) value is below 0,05, H0 is rejected. Educational status factor and shopping attitude factor are not related with each other.

**Table 12: Paired T-Test on “Age” with Advertisement Perception and Purchasing of Participants**

	Paired Differences				T	df	Sig. (2-tailed)		
	X	Standard deviation	Standard error	95% Confidence Interval of the Difference					
				Lower	Upper				
I purchase through advertisements I see on Facebook. - Age	1,971	1,315	,047	1,879	2,063	42,080	787 ,000		

**H1:** There is a positive or negative relationship between age and shopping.

**H0:** Age factor and shopping attitude factor are not related with each other.

As Sig (0,000) value is below 0,05, H0 is rejected. Age factor and shopping attitude factor are related with each other.

**Table 13: Paired T-Test on “Gender” with Advertisement Perception and Purchasing of Participants**

	Paired Differences				T	df	Sig. (2-tailed)		
	X	Standard deviation	Standard error	95% Confidence Interval of the Difference					
				Lower	Upper				
I purchase through advertisements I see on Facebook. – Gender	2,868	1,052	,037	2,794	2,942	76,560	787 ,000		

**H1:** There is a positive or negative relationship between gender and shopping.

**H0:** Gender factor and shopping attitude factor are not related with each other.

As Sig (0,000) value is below 0,05, H0 is rejected. Gender factor and shopping attitude factor are related with each other.

**Table 14: Paired T-Test on “Facebook Login Period” with Advertisement Perception and Purchasing of Participants**

	Paired Differences				t	df	Sig. (2-tailed)		
	X	Standard deviation	Standar d error	95% Confidence Interval of the Difference					
				Lower	Upper				
I purchase through advertisements I see on Facebook. – Average Facebook login frequency	2,569	1,576	,056	2,458	2,679	45,743	787 ,000		

**H1:** There is a positive or negative relationship between Facebook login period and shopping.

**H0:** Facebook login period factor and shopping attitude factor are not related with each other.

As Sig (0,000) value is below 0,05, H0 is rejected. Facebook login period factor and shopping attitude factor are related with each other.

**Table 15: Paired T-Test on “Occupation” with Advertisement Perception and Purchasing of Participants**

	Paired Differences				t	df	Sig. (2-tailed)		
	X	Standard deviation	Standard error	95% Confidence Interval of the Difference					
				Lower	Upper				
I purchase through advertisements I see on Facebook. – Job status (Occupation)	3,089	1,235	,044	3,002	3,175	70,225	787 ,000		

**H1:** There is a positive or negative relationship between occupation and shopping.

**H0:** Occupation factor and shopping attitude factor are not related with each other.

As Sig (0,000) value is lower than 0,05, H0 is rejected. Occupation factor and shopping attitude factor are related with each other.

In factor analysis, 28 items with likert scale were analyzed. As a result of various tests, it was found that omitting one item from the analysis would impact directly and positively. Therefore, it was decided to proceed with 27 out of 28 items. Below is the summary of analysis results:

<b>Table 16: KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,892
Bartlett's Test of Sphericity	Approx. Chi-Square	23321,857
	Df	351
	Sig.	,000

KMO and Bartlett tests were made to determine the appropriateness of factor analysis, and the results above were found.

According to it, KMO measure that measures the appropriateness of sampling for factor analysis was found  $0,892 > 0,6$ . This indicates that sampling is particularly appropriate for analysis. As Bartlett measure that is sphericity measure is  $\text{Sig} (0,000) < 0,05$ , this indicates that there is correlation between variables, and thus factor analysis is applicable.

When total variance table is analyzed, it is seen that 4 factors obtained explains 72% of the total variance.

**Table 17: Total Variance Table**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14,115	52,278	52,278	14,115	52,278	52,278	6,101	22,597	22,597
2	2,331	8,633	60,910	2,331	8,633	60,910	6,097	22,582	45,179
3	1,876	6,949	67,859	1,876	6,949	67,859	5,282	19,564	64,743
4									
5	1,071	3,968	71,827	1,071	3,968	71,827	1,913	7,084	71,827
6									
7	,955	3,536	75,363						
8									
9	,801	2,967	78,330						
10	,667	2,472	80,802						
11									
12	,655	2,427	83,229						
13									
14	,635	2,350	85,579						
15									
16	,530	1,963	87,542						
17									
18	,440	1,631	89,173						
19									
20	,403	1,493	90,667						
21									
22	,390	1,445	92,111						
23									
24	,323	1,196	93,307						
25									
26	,293	1,083	94,390						
27									
	,258	,954	95,345						
	,252	,933	96,277						
	,180	,665	96,942						
	,155	,576	97,518						
	,148	,548	98,066						
	,135	,500	98,566						
	,096	,357	98,923						
	,086	,320	99,243						
	,064	,236	99,478						
	,058	,214	99,693						
	,042	,155	99,848						
	,041	,152	100,000						

When factor explanation tables are analyzed, it is seen that 4 factors obtained are as follows:

**1. Factor: I access brands through Facebook advertisements**

Firms reach me through Facebook advertisements. I also like firms on Facebook that I love or shop. I am interested in products and advertisements posted on Facebook pages.

**2. Factor: I get informed about firms through their Facebook pages.**

I get informed about firms through their Facebook pages. I keep updated about issues such as sales and product development.

**3. Factor: I contact with firms via Facebook.**

When I have a question about firms, or I need to contact with them, I do through their Facebook pages. Thus, I receive quicker reply to my questions and concerns.

**4. Factor: I do shopping via Facebook.**

I think that Facebook pages of firms are a safe and appropriate way of shopping.

**Table 18: Factor Analysis**

**Rotated Component Matrix**

	Component	1	2	3	4
I follow Facebook pages of the firms of which I am a customer.		,858			
I am interested in products that my friends like, comment on, or share on Facebook.		,781			
I follow Facebook pages of the firms of which I may be a customer.		,755			
I am interested in advertisements that my friends like, comment on, or share on Facebook.		,698			
I am informed about many new firms thanks to Facebook advertisements.		,673			
I receive information about the prices of products on Facebook pages of firms.		,657			
I purchase more from a firm when I like its Facebook page.		,526			
I follow Facebook pages of the firms that my friends like.		,403			
I receive information from Facebook page of a firm about their products or services.		,737			
I attend the events on Facebook pages of firms that they organize for product development.		,734			
I prefer Facebook pages of firms to contact with other customers.		,730			
I am interested in advertisements that I see on Facebook.		,713			
I think purchasing a product from Facebook pages of firms or sites that their Facebook page directs is more practical.		,628			
I use online services on Facebook pages of firms.		,620			
I follow Facebook pages of firms to be informed about sales		,611			
I like, comment on, or share with my friends the advertisements that I see on Facebook.		,606			
I think products on Facebook pages of firms are cheaper.		,578			
I think I will receive a quicker reply to the comments or questions I make on Facebook pages of firms.		,952			
I prefer Facebook pages to contact with firms.		,869			
I review the products and prices on Facebook pages of firms before purchasing.		,732			
When I like Facebook page of a firm, I suggest it to my friends whom I think will be interested.		,707			
I comment my positive or negative opinions on Facebook pages of firms about them or their products.		,666			
I receive accurate information about a firm through its Facebook page.		,624			
I comment on, like and share with my friends the products of firms on their Facebook pages.		,508			
I purchase through advertisements I see on Facebook.		,818			
I purchase through discount vouchers of firms on Facebook.		,785			
I think purchasing a product from Facebook pages of firms or sites that their Facebook page directs is safe.		,755			

## CONCLUSION AND DISCUSSION

Most of the participants are young male students with over undergraduate education level and low income. Given the findings as a result of analysis, it is seen that participants consist of intensive Facebook users. Facebook login rates of students are higher than other professional groups. A large majority of them stated that they login Facebook a couple times a day. In addition to frequent login to Facebook, their habits of shopping via Facebook are also high. Purchasing and using discount vouchers through Facebook was found higher in those with higher education than those with lower education. Moreover, not only advertisements appeared on Facebook are seen, but they are shared with friends, as well. In individuals with higher education, advertisement perception is higher. Participants follow sales on Facebook and do shopping through these sales. In addition, it is seen that following sales differs in those with undergraduate and above education level.

When it comes to professional groups, students think that purchasing a product from Facebook pages of firms or sites that their Facebook page directs is safer. It was found that those who do shopping more from firms whose Facebook pages they like (loyal customer) have undergraduate and above education level and they are students. Furthermore, income level, educational status, age, gender, internet usage level, and job status (occupation) were related to users' perception of advertisement and their purchasing.

28 items asked as a result of factor analysis were perceived from 4 aspects in total. According to it, participants stated that they access the brand through Facebook advertisements and interact with these pages by liking and sharing, Facebook pages are an effective method to reach/be informed about the firm and keep updated about products/services, they contact with the firm via Facebook and they can find quick solutions to their problems and concerns, and finally they do shopping via Facebook.

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