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Consumers on the Internet – How Common is it to Shop Online? - A Study of Who in a Population, Is Shopping on the Net?

Ingvar Tjostheim

Norwegian Computing Center, Gaustadalléen 23, Postboks 114, Blindern
0314 Oslo, Norway
Ingvar@nr.no

Abstract

The web-population in one of the Scandinavian countries, Norway is the focus of this study.

National representative telephone surveys are used in order to measure the popularity of Internet-shopping among Norwegian consumers. Key findings are; the typical frequent Internet-shopper tends to be male, a majority of them have a college or university degree, they are relatively young and have a relatively high income. It is qute common to shop online - nearly half of the Norwegians with access to Internet has purchased something on the Internet at least once, and the growth figures from 1999 to 2000 were surprisingly high. A cluster analysis shows that it is the most frequent Internet-users that also are spending most money online. The online private consume for 2000 was approximately 1.6% of the total consume in Norway.

Keywords: *e-commerce, online shopping, consumer behavior.*

1. Introduction

The number of distribution channels is growing. Internet is one of them, and according to the market research firm Nua (www.nua.ie) there are approximately 400 million people with access to Internet. US is the largest market with an online population of more than 116 millions [3] (Shapiro & Rohde, 2000) In the Scandinavian countries the majority of the population has access to Internet. Due to the fact that the Internet-population is relatively large and advanced, studies from

these countries might be useful for other countries even though national difference will occur.

There are some studies about online shopping and the online shoppers particularly from the US. About 18% (1999 figures) of the US Internet-population is shopping online and they are predominantly affluent males. [3] However, the next quotation illustrates that the market share of online shops is quite small; "*In preliminary analysis we find that Internet stores have a long way to go before they become a viable threat to traditional outlets (catalogues, retail stores, and so forth).* " [1] However, it seems that some services or product categories have been more successful than others; *" Some product categories, such as software, financial services, or travel, are widely viewed as successful on the Internet today. To expand online sales, the Internet must attract a critical mass of mainstream shoppers, not just addicted specialists shopping for particular products.*" [4]

The focus in this paper is on how many is shopping online and what are the characteristics of these shoppers. The term "shopping" also includes services such as travel services. And the chosen population for this study is the Norwegian Internet-population. The size of the Norwegian population is 4.5 million people and approximately 3.6 million are 15 years or older. The surveys 1999 and 2000 were targeted at the sub-population 15 years or older.

The following four questions are address in this paper;

1) what percentage of the Norwegians are shopping online? Or, is it common to shop online?
2) to what extent are those shopping online different compared to the population in general?
3) what kind of amounts do the consumers spend online?
4) to what segments of the Internet-users do the e-shoppers belong?

2. About the Surveys

The main survey is a national representative telephone survey in the Norwegian population from November 2000([1]). The number of respondents was 2007. The sections with questions about Internet-services were answered by a sub-sample ("the Internet-population") of 1253 respondents which equals 63% of the population 15 years or older. The results from this survey are compared to two similar surveys in 1998 and 1999 with 2004 and 2029 respondents in each of them. In 1999, 354 respondents answered that they had ordered or bought something online. In 2000 this number had increased to 602.

[1] The survey was carried out by MMI, a market research firm based in Oslo, Norway, www.mmi.no.

For these surveys the response rates are not known. However, according to representatives from the national market research industry a response rate of 40 - 50 percent on CATI-surveys can be expected.

3. The Results

Table one shows what percentage of the Norwegians that have used the Internet as a shopping channel.

	1998	1999	2000
In percent of the Norwegian population, 15 years +	10%	17%	30%
In percent of the Norwegian Internet-population	24%	32%	48%
In numbers	375.000	620.000	1.080.000
	N=2004	N=2029	N=2007

Table 1: *the number that has purchased something online (at least once)*

The number of Norwegians that have purchased goods or services online has nearly tripled in two years time. However, it is more important to notice that it is nearly 50% of those with access to Internet that has e-commerce experience.

Sweden is the country next to Norway. For comparisons it is often chosen since the demographics, the standard of living, GDP per capita etc. is very similar. In the next table results from a national representative survey by Statistics Sweden [6] are compared to the Norwegian survey.

	Sweden September 2000 16 – 64 years old	Norway November 2000 15 – 64 years old
Has access to a PC	90%	82%
Has access to the Internet	80%	71%
Is using e-mail	60%	58%
Has used online bank-services	29%	33%
Has ordered goods or services online.	29%	35%
N=	9000	1685

Table 2*: A comparision between the Swedish and the Norwegian populations*

According to Statistics Sweden the survey had a high response rate (approximately 80%) which is significantly better than the market research companies normally are able to achieve, including the Norwegian surveys used in this paper. Hence, it is

possible that the difference in online purchasing between Norway and Sweden is much less the 6 percent. For instance, in a study by the market research firm MMI [7], 9% in Sweden population ordered gifts online for Christmas 2000 compared to 5% in Norway.

Booking of Travel Services

It is very common to use the Internet to search for travel information. The travel industry is also one of the few industries that has been reasonably successful in e-commerce. The next table shows the percentage of the Norwegian population that has booked holiday-packages and/or air-tickets online.

	2000 Booking air-tickets monthly	**2000** Has booked holiday-packages or air- tickets online at least once
In percent of the Norwegian population, 15 +	4%	**16%**
In percent of the Norwegian Internet-population	7%	25%
In numbers	150.000	570.000
N=	2007	2007

Table 3: *Booking of travel services online*

The US has the largest e-commerce market and travel services are one of the most popular services to purchase online. According to TIA [8]; " *more than 59 million online travelers used the Internet last year (2000) to get information on destinations or to check prices or schedules… ….of that group, 25 million actually purchased travel products or services online during 2000*" It seems that adults in this survey are defined as those that are 18 years or older which equals 202 Americans. Then the 25 million then represent 12% of this population. This is a lower figures compared to the Norwegian figures presented in table 3. However, it is reasonable to assume that a lower percentage of the American population is "travellers" than the Norwegians. It is for instance more likely that person in a small country is going abroad than a person from a large country. Nevertheless, the Norwegian travellers seem to be quite willing to book travel services online.

	1999	**2000**
A Norwegian web-site	65%	70%
A foreign web-site	25%	18%
Don't know / can't remember	10%	12%
N =	313	277

Table 4: *The use a web-sites from a Norwegian or a foreign companies*

In order to get a picture of the consumers Internet-behaviour, the respondents that had bought something online the last 30 days were given the following question; "*Last time you purchased something on the Internet, did you use a web-site from a Norwegian or web-site from a foreign company*?"

It is not unusual to have headlines or media-articles that focus on the fact that some consumers feel insecure with regard to Internet-shopping or problems with fraud. Hence, it was expected that the majority would to prefer to shop from web-sites belonging to Norwegian companies.

2000	Is shopping online less frequently than monthly	Is shopping online monthly or more frequently.	The Norwegian online population ("web-users")	The Norwegian population
Percentage men	70%	50%	60%	50%
Percentage with university or college degree (graduates)	55%	42%	46%	35%
Percentage that has used credit card online	39%	23%	29%	-
Percentage under 40 years old	68%	55%	57%	42%
Percentage with a net monthly income of at least 2.000 Euro	50%	33%	36%	27%
N =	297	305	1094	2007

Table 5: *Differences between the frequent-, the less-frequent online customers and the Internet-population*

Approximately 50% of the online shoppers are purchasing something online on a monthly basis. The members of this segment tend to be male, a majority has a college or university degree, they are relatively young and have a good income. Hence, they can be described as „affluent males" [2]. However, the second segment the less frequent online shoppers are very similar to the web-population with one expection – the percentage of women is higher. If these two segments of online shoppers are merged, there will be more similarities than differences with the web-population. On the other hand, they can still be described as relatively young and affluent compared to the population in general.

There are not many surveys documenting the use of credit card on the Internet. Even though VISA in most cases is a debit card it is likely that the figures for use of credit card include VISA-cards since a postal survey among Norwegians which did divide between debit and credit gave the same total number as the number presented in table six.

	1999 **Percent – in numbers**	**2000** **Percent – in numbers**
No	76% - 490’	71% - 780’
Yes	24% - 150’	29% - 320’
Yes, one time	9% - 60’	10% -110’
Yes, 2 - 3 times	8% - 50’	9% - 90’
Yes, several times	7% - 40’	11% - 120’
N =	335	617

Table 6: *The use of credit card on the Internet*

The number that has used their credit card online has doubled in one year. However, it seems that the majority is reluctant to use their card number online.

The number that is shopping online is interesting. Moreover, the amounts they spend are as important. The respondents that had shopped online the last month were asked about the amount used on the Internet.

	1999	**2000**
median (amount in euro)	69,-	125,-
mean (amount in euro)	375,-	531,-
N =	235	277

Table 7: *Amounts spent online per person - “How much have you purchased for the last 30 days?”*

The table shows that increase has been strong. If the median is the „average“ online shopper, the increase is 80 percent in a one year.

	Goods & services (ex. shares & bonds)	**Shares & bonds**
Estimate - in numbers (people)	450.000	70.000
Average amount per person	438,-	800,-
Estimated monthly in millions (Euro)	197	56
N =	275	275

Table 8: *Estimated monthly turnover (November 2000)*

Even though the number than sell and buy shares and bonds is relatively low compared to the other group, the amounts spent in this segment is high. If shopping

from the home-computer is defined as private consume it is possible to estimate the yearly private online consume of the Norwegians in 2000.

Goods or services including. tickets, holidays and air-travel	**November 2000 Has booked from the home-computer**
estimated number of people	350.000
estimated monthly turnover in Euros (million)	137 mill
N=	239

Table 9: *Private online consume*

According to Statistics Norway [9] the private consume in 1999 was 69 billion Euros. The figures in table 10 represent the month November 2000. If the typical month for 2000 is the average of November 2000 and October 1999, the yearly online private consume is estimated to 1.15 billion Euros or approximately 1.6% of the total.

	November 2000
From Norwegian companies (web-sites) – in Euro	200
From foreign companies (web-sites) – in Euro	55
N =	275

Table 10: *Estimated monthly turnover in millions Euro from Norwegians and foreign web-sites?*

It seems that most of the money goes to national companies or web-sites that the shoppers perceive as Norwegian.

	All	**Men - women**
1 – 62.4,-	23%	54% - 46%
62.5 – 125,-	22%	77% - 33%
126 – 250,-	21%	68% - 32%
251 – 625,-	16%	63% - 37%
626 – 12.500,-	18%	72% - 28%
All:		66% - 34%
N = (has purchased online the last 30 days)	277	277

Table 11: *Amounts (Euro) and differences between men and women*

With references to the fact that more men are shopping online than women it is also interesting to notice that amounts spent by men is slightly higher than the amounts spent by women.

2000	**15 - 24 years old**	**25 - 39 years old**	**40 - 59 years old**	**60 years or older**
1 – 125,-	54%	44%	41%	
126 – 375,-	36%	40%	25%	
376 – 12.500,-	10%	16%	33%	
N = 277	50	134	87	6

Table 12: *Age-profile and amounts (Euro) spent online*

The age group 25 – 39 contains the most active online shoppers – nearly 50% of those that answered that they had purchased something online the last 30 days belong to this group. Moreover, the members of the age group 40 - 59 seem to purchase more expensive goods or services than the two other groups. However, the most important difference is the difference between those over and under 60 years old – very few in the last group is shopping online.

Income in the household - 2000	**Under 37.500**	**37.500 – 62.500**	**Over 62.500**
1 – 125,-	52%	48%	38%
126 – 375,-	45%	32%	35%
376 – 12.500,-	(3%)	20%	27%
N = 247	29	77	141

Table 13: *Yearly income and amounts spent online (Euro)*

It is the members of the highest income segment that shop most frequently online. They are also spending the largest amounts on Internet-shopping.

4. A Cluster Analysis

A cluster analysis, as described by Huang [5], was performed on the data set from November 2000 in order to distinguish between the different segments of Internet users and to study the differences between the clusters or segment with regard to e-commerce. The following variables, the answers to the question; *„for what purpose do you use the Internet“* were used for the clustering; use email, read news, use online bank-services, use search services or databases, games or entertainment, education, travel information, and has purchased something online.

2000	Segment A	Segment B	Segment C	Segment D	The Norwegian Internet-population
E-mail	42%	**99%**	**94%**	98%	81%
Read news	22%	91%	**83%**	48%	66%
Use online bank-services	15%	76%	24%	**90%**	45%
Travel information	23%	90%	52%	88%	60%
Has purchased online	14%	85%	29%	**86%**	49%
	N = 367	N = 408	N = 356	N=112	N= 1253

Table 14: *Overview of the segments*

The result was four different clusters which are described in more detail in the next table.

Frequent (F) Seldom (S) Never (N)	Segment A F - S - N	Segment B F - S - N	Segment C F - S - N	Segment D F - S - N	The Norwegian Internet-population F - S - N
E-mail	29 - 13 - 58	**87** - 12 - 1	15 - **78** - 6	36 - 63 - 2	45 - 36 - 19
Read news	11 - 11 - 78	**63** - 28 - 9	5 - **75** - 17	7 - 41 - 52	26 - 39 - 34
Use online bank-service	8 - 7 - 85	59 - 17 - 24	15 - 9 - 76	**79** - 12 - 10	33 - 11 - 55
Travel information	11 - 13 - 77	40 - 50 - 10	24 - 28 - 48	81 - 7 - 12	30 - 29 - 40
Has purchased online	5 - 9 - 86	39 - **47** - 15	10 - 19 - 71	**74** - 12 - 14	24 - 24 - 51
	N = 367	N = 408	N = 356	N=112	N= 1253

Table 15: *The segments and how frequent the services are used*

The clusters or segments can be ccharacterised in the following way; The members of the segment A are using the Internet seldom. The members of the segment B are typical daily users of services like e-mail and/or online newspapers & news-services. Most of the members of this segment have ordered something online, but less frequently than the members of segment D. The members of segment C are typically weekly users of e-mail and online news services. The members of segment D are the most frequent users of online bank-services and online purchasing. A frequent online shopper (online purchase) is defined as shopping monthly on the Internet.

When looking at these segments, it can be hypothesised that the members of segment D also are the big spenders online. Since the respondents also received the

question "how much did you spent online the last 30 days" it is possible to test this hypothesis.

2000	Segment A	Segment B	Segment C	Segment D	Internet-population
Percentage that has purchased online the last month	6%	41%	10%	44%	22%
Median amonut (Euro)	75	125	125	88	125
Average amount (Euro)	184	711	347	145	520
	N = 367	N = 408	N = 356	N=112	N=1243

Table 16: *The monthly spending online*

Table 16 shows that it is not the members of Segment D that is using the largest amounts online, but the typicla frequent Internet-users (Segment B). One explanation for this has to do whith booking of holiday packages. Very few is buying vacation packages online monthly. Hence, those that are booking holidays on the web belong to segement B.

2000	Segment A	Segment B	Segment C	Segment D	Internet-population
Monthly net income					
< 1000 Euro	30%	15%	32%	14%	29%
1000 – 1999 Euro	48%	35%	45%	38%	34%
2000 – 2749 Euro	19%	28%	18%	27%	29%
2750 Euro +	3%	22%	5%	20%	9%
	N = 325	N = 380	N = 332	N=99	N=1136
Age- groups					
15 – 29	24%	28%	33%	27%	28%
30 – 39	22%	29%	26%	35%	26%
40 +	55%	43%	41%	38%	46%
	N = 367	N = 408	N = 356	N=112	N=1243

Table 17: *Income and age-profile*

The members of Segment B and D are quite similar to each in terms of income, but the members of Segment D seem to be somewhat younger.

5. Concluding Remarks

The results from these surveys show that in Norway it has become quite common to purchase goods or services on the Internet. Moreover, the amounts spent had a

sharp increase from 1999 to 2000. Even though only approximately 1.6% of the private consume is online consume, this change has happened in less than five years. There are differences between the frequent online shoppers and the web-population in general. The frequent online shoppers tend to be men with relatively high income, and they are typically between 25 and 39 years old. Even though it is common to shop online it does mean that Internet-shopping represent a real threat to the traditional distribution channels; "*First, changing decades old physical shopping habits will take more than a couple of years. In fact, it may take 10 years before computer conditioned Generation Y is purchase-enabled. Second, only a minority percentage of the online population actually purchases a good or service and a significant number of Web shoppers have been frustrated by the experience.*" [2] However, if the growth figures from 1999 to 2000 in the Norwegian consumer market are representative for the next few years, Internet will be an important distribution channel along side the traditional once in a relative near future.

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