Project IV:

Factors Influence American Consumers' Intention of Becoming the Early Adopters of the New Interactive Home Shopping Device of Electronic Shopping Inc. (ESI)

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I. Client's Problem and Research Questions

Our client is Electronic Shopping Inc. (ESI), a newcomer to the world of home shopping. Since ESI was going to introduce the U.S market their new product, a device that interfaces with existing television receivers and cable connections to enable home viewers to shop interactively, they would like to know who are their potential buyers and targeting audience. Thus, during this report, we will investigate the following questions:

Who are most likely to adopt this new product in home shopping?

What drives Americans' interest in adopting this new technology?

By analyzing the existing dataset, we'll help ESI to better understand the Americans' shopping habits and their market segments. Besides, by pinpointing the profile of their potential buyers, we are going to generate operable suggestions for further marketing and promotion of the product.

II. Analytical Plan

1. Theoretical approach of the research

Our theoretical approach of this research was developed based on two well-established social psychological theories - the theory of reasoned action (Fishbein & Ajzen, 1975) and the theory of innovation adoption (Rogers, 1995). The reasons why we chose this two theories as our theoretical framework were:

a. The theory of reasoned action was widely used to explain the consumer decision-making process, and has been highly recommended for the assessment of purchase intention for high-involvement products such as apparel (Mowen & Minor, 1998).

b. The theory of innovation adoption well explains diverse aspects of adoption of innovative technology (Henrichs, 1995).

According to the theory of reasoned action (TRA), proposed by Fishbein and Ajzen (1975, Ajzen & Fishbein, 1980), there are two determinants for behavioral intentions: attitude toward the object or behavior such as home shopping, and an individual's perception of normative social pressure to perform or not perform the particular behavior. The attitude toward the behavior is measured by the conjunction of beliefs about a certain behavior and the individual's evaluation of the outcome resulting from the behavior.

According to Rogers's theory of innovation adoption (1995), prior practice with an innovation is essential in building how-to knowledge and enhancing trialability and observability of the innovation.

2. Suggesting item groupings

Based on the two theories, we went through the telephone and mail questionnaire, and find out that many questions were overlapped with each other. Thus, we suggested grouping them into 11 groupings.

Table 1 Suggeting item groupings

Groupings	**Items**	**Level of measurement**	**Analysis**
Belief in convenience of shopping	SHP-Q.1 Saving time is more important than saving a few dollars (sh16) SHP-Q.1 I would pay more for convenience (sh26)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis
Preference for personal service	SHP-Q.1 I like being left alone when I shop (sh28) SHP-Q.1 If I never had to deal with a salesperson in a store, I'd be very happy (sh33)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis
Preference of shopping through catalog	SHP-Q.1 I am more likely to buy something sold in a store than sold in a catalog(sh12) SHP-Q.1 Generally, products and services offered through the mail turn out to be disappointing when I receive them (sh30)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis
Perceived convenience of shopping by mail	SHP-Q.1 I like to shop by mail so that I don't have to deal with salespeople(sh19) SHP-Q.1 I'm too busy to shop in stores, so buying through the mail is a real convenience(sh23)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-

			Regression Cluster-Analysis
Perceived entertainment from TV	TV-Q.2 I Watch TV to be Entertained (tv2a) TV-Q.2 I Watch TV Because I Enjoy It(tv2g) TV-Q.2 I Watch TV to Relax or Unwind (tv2m) TV-Q.2 I Watch TV To Cheer Me Up When I'm Feeling Down (tv2k) TV-Q.2 I Watch TV Because It Keeps Me Company (tv2h)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis
Dependency on TV	TV-Q.9 I Would Love To Be Able To Watch TV 24 Hours a Day (tv9c) TV-Q.9 I'm a Real "Couch Potato"(tv9i) TV-Q.10 Feeling If TV Did Not Exist(tv10)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis
entertainment from radio	RAD-Q.5 Reasons for Listening to Radio-To Be Entertained(rd5a) RAD-Q.5 Reasons For Listening To Radio-Because I Enjoy It(rd5e) RAD-Q.5 Reasons for Listening To Radio-To Relax Or Unwind (rd5g) RAD-Q.5 Reasons For Listening To Radio-To Cheer Me Up When I'm Feeling Down(rd5k)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis
Dependency on telephone	TEL-Q.7 Feeling If Telephones Did Not Exist (te7) CT-Q.1 The telephone is an essential part of my daily living -- I couldn't do without (ct1c) CT-Q.1 Talking on the telephone is a waste of time for me (ct1g)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis
Openness to new things	CT-Q.1 I love cutting edge, high tech things (ct1v) YL-Q.1 Psychographics-I am Usually the First to Try New Things (yl58) SHP-Q.1 I am very interested in any new products and services (sh15) SHP-Q.1 I like to try new products when they first come out (sh4)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-

			Regression Cluster-Analysis
Perception of how tech contribute to life	CT-Q.1 Computers and technology will ruin the quality of my life(ct1m) CT-Q.1 Computers and technology will eventually be used to limit personal freedom(ct1z) CT-Q.1 Computers and technology control too much of our lives already(ct1ab)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis
Attitude towards Interactive Technology	CT-Q.1 I prefer to use an ATM machine for all my banking needs (ct1g) CT-Q.1 I use ATMs for all my banking including deposits and transfers (ct1l) CT-Q.1 I am very comfortable using an ATM to make deposits or pay bills (ct1w) CT-Q.1 I prefer to deal directly with a teller for my banking needs (ct1y)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis

Groupings	**Items**	**Level of measurement**	**Analysis**
Dependent Variable	Look through catalogs and order items using your remote (fu2a6) See a ”video” shopping mall and have a salesperson demonstrate the products for you (fu2a7) See a grocery store items, order them and have them delivered to your home (fu2a8) Look at the menus of local restaurants and order food to be delivered to your home (fu2a12)	interval	Frequency Mean Median Mode Standard-Deviation Correlations Multiple-Regression Cluster-Analysis

3. Potential descriptors

Table 2 Potential Descriptors

	items	**level of measurement**	**analysis**
Demographics	Respondent Age Group	nominal	Frequency crosstabulation
	Q.64a Whether Currently in School	nominal	Frequency crosstabulation
	Q.65a Whether Presently Employed	nominal	Frequency crosstabulation
	Q.65b Whether Employed Full-time or Part-time	nominal	Frequency crosstabulation
	Q.75 Marital Status	nominal	Frequency crosstabulation
	Q.79 Total Household Income	interval	Frequency one-way ANOVA
	Q.81 Race	nominal	Frequency crosstabulation
psychographics	Q.6 Program Choices Influencing Decision to Get Cable	nominal	Frequency crosstabulation
	Q.7 Whether Get Premium Channels	nominal	Frequency crosstabulation
	Q.10a VCR Ownership	nominal	Frequency crosstabulation
	Q.12 Whether Currently Rent Videos	nominal	Frequency crosstabulation
	Q.13 Types of Movies Rent	nominal	Frequency crosstabulation
	Q.14 Number of Times Went Out to the Movies Past 6 Months	ratio	Frequency one-way ANOVA
	Q.15 Types of Movies Go to See	nominal	Frequency crosstabulation
	Q.17 Average Number of Weekday Hours Spent Listening to the Radio	ratio	Frequency one-way ANOVA
	Q.18 Radio Program Preferences	nominal	Frequency crosstabulation

	Q.19 Equipment Owned	nominal	Frequency crosstabulation
	Q.22 Whether Use Cellular Phone Personally	nominal	Frequency crosstabulation
	Q.34 Frequency of Using Any PC That Have Access To	interval	Frequency one-way ANOVA
	Q.35 Frequency of Using PC at Home	interval	Frequency one-way ANOVA
	Q.42 Likelilood of Household Member Buying a PC Within Next Year	interval	Frequency one-way ANOVA
	Q.43 PC Comfort Level	interval	Frequency one-way ANOVA
	Q.45 Feelings About Invasion of Privacy Concerning Computers and Technology	interval	Frequency one-way ANOVA
	Q.54 games and other activities	nominal	Frequency crosstabulation
	Q.57 Whether Interested in Science and Math	nominal	Frequency crosstabulation
	Q.58 Whether Interested in Music and Art	nominal	Frequency crosstabulation
	Q.59 How Much Enjoy Keeping up With the News	interval	Frequency one-way ANOVA
	TV-Q.6A When Watch TV During Weekday	nominal	Frequency crosstabulation
	TV-Q.6A When Watch TV During Weekends	nominal	Frequency crosstabulation
	TV-Q.8 Reaction When TV Commercials Come On	nominal	Frequency crosstabulation
	MOV-Q.1 Whether Go Out To the Movies	nominal	Frequency crosstabulation
	RAD-Q.1 Radio Listening	nominal	Frequency crosstabulation
	RAD-Q.2A Radio Programs Listened To	nominal	Frequency crosstabulation
	RAD-Q.2B Radio Programs Listened To Most Often	nominal	Frequency crosstabulation
	RAD-Q.3 Types of Music Listen To	nominal	Frequency crosstabulation

	RAD-Q.4 Reaction When Radio Commercials Come On	nominal	Frequency crosstabulation
	NWS-Q.1 If Read Newspapers	nominal	Frequency crosstabulation
	MAG-Q.1 Whether Read Magazines	nominal	Frequency crosstabulation
	MAG-Q.3 Magazines Read on a Regular Basis	nominal	Frequency crosstabulation
	BKS-Q.1 Whether Read Books	nominal	Frequency crosstabulation
	BKS-Q.3 Types of Books Read Regularly	nominal	Frequency crosstabulation
	SPT-Q.1 Sports Participate in on a Regular Basis	nominal	Frequency crosstabulation
	SPT-Q.2 Participation in Basketball	nominal	Frequency crosstabulation
	SPT-Q.2 Participation in Football	nominal	Frequency crosstabulation
	SHP-Q.1 I usually stick to the brands I know	nominal	Frequency crosstabulation
	SHP-Q.1 I don't shop for the brand, I shop for the best price	nominal	Frequency crosstabulation
	SHP-Q.1 I often buy things on impulse	nominal	Frequency crosstabulation
	SHP-Q.1 I tend to be skeptical about claims made in advertising	nominal	Frequency crosstabulation
	SHP-Q.1 I like to browse in stores or window shop	nominal	Frequency crosstabulation
	SHP-Q.1 I sometimes buy expensive things just to impress my friends	nominal	Frequency crosstabulation
	SHP-Q.1 I like to try everything on when I shop for clothes	nominal	Frequency crosstabulation
	SHP-Q.1 I don't like to shop	nominal	Frequency crosstabulation

4. Outlier checking: Frequency Descriptions of each item in every grouping

In case there are any outliers, we run a through frequency of every item in each grouping. And we found no outliers. Frequency descriptive tables are attached in the appendix at the end.

Table 3 Frequency Description of Measuring Items

items	N	Most frequent response	Number/percentage of Most frequent response	Mean	Median	Mode	SD
SHP-Q.1 Saving time is more important than saving a few dollars(sh16)	2106	5	416/19.5%	4.93	5.00	5	2.6
SHP-Q.1 I would pay more for convenience(sh26)	2095	1	384/18.0%	4.84	5.00	1	2.7
SHP-Q.1 I like being left alone when I shop(sh28)	2103	10	450/21.1%	7.03	7.00	10	2.5
SHP-Q.1 If I never had to deal with a salesperson in a store, I'd be very happy(sh33)	2096	5	460/21.5%	4.68	5.00	5	2.6
SHP-Q.1 I am more likely to buy something sold in a store than sold in a catalog(sh12)	2099	10	594/27.8%	7.54	8.00	10	2.5
SHP-Q.1 Generally, products and services offered through the mail turn out to be disappointing when I receive them(sh30)	2076	5	331/15.5%	5.86	6.00	5	2.8
SHP-Q.1 I like to shop by mail so that I don't have to deal with salespeople(sh19)	2101	1	841/39.4%	3.2	2.00	1	2.5
SHP-Q.1 I'm too busy to shop in stores, so buying through the mail is a real convenience(sh23)	2078	1	970/45.4	2.96	2.00	1	2.5
TV-Q.2 I Watch TV to be Entertained(tv2a)	2078	10	749/35.1	8.14	9.00	10	2.1
TV-Q.2 I Watch TV Because I Enjoy It(tv2g)	2075	10	902/42.2%	8.29	9.00	10	2.1
TV-Q.2 I Watch TV to Relax or Unwind(tv2m)	2069	10	385/18.0%	6.66	7.00	10	2.8
TV-Q.2 I Watch TV To Cheer	2043	1	798/37.4%	3.63	2.00	1	2.9

Me Up When I'm Feeling Down(tv2k)							
TV-Q.2 I Watch TV Because It Keeps Me Company(tv2h)	2057	1	374/17.5%	5.34	5.00	1	3.1
TV-Q.9 I Would Love To Be Able To Watch TV 24 Hours a Day(tv9c)	1845	1	1338/62.6%	1.91	1.00	1	1.9
TV-Q.9 I'm a Real "Couch Potato"(tv9i)	1820	1	836/39.1%	2.87	2.00	1	2.4
TV-Q.10 Feeling If TV Did Not Exist(tv10)	2066	10	409/19.1%	6.42	7.00	10	2.9
RAD-Q.5 Reasons for Listening to Radio-To Be Entertained(rd5a)	1941	10	653/30.1%	7.72	8.00	10	2.5
RAD-Q.5 Reasons For Listening To Radio-Because I Enjoy It(rd5e)	1936	10	941/44.4%	8.50	9.00	10	2.1
RAD-Q.5 Reasons for Listening To Radio-To Relax Or Unwind(rd5g)	1918	10	444/20.8%	6.52	7.00	10	3.0
RAD-Q.5 Reasons For Listening To Radio-To Cheer Me Up When I'm Feeling Down(rd5k)	1900	1	643/30.1%	4.28	4.00	1	3.2
TEL-Q.7 Feeling If Telephones Did Not Exist(te7)	2100	1	823/38.5%	3.63	2.00	1	3.0
CT-Q.1 The telephone is an essential part of my daily living -- I couldn't do without(ct1c)	2084	10	636/29.8%	6.87	8.00	10	3.0
CT-Q.1 I love cutting edge, high tech things(ct1v)	2078	1	380/17.8%	4.96	5.00	1	3.9
YL-Q.1 Psychographics-I am Usually the First to Try New Things(yl58)	2092	5	446/20.9%	4.90	5.99	5	2.4
SHP-Q.1 I am very interested in any new products and services(sh15)	2106	5	396/18.5%	6.18	6.00	5	2.4
SHP-Q.1 I like to try new products when they first come	2085	5	437/20.5%	4.82	5.00	5	2.4

out(sh4)							
CT-Q.1 Computers and technology will ruin the quality of my life(ct1m)	2065	1	898/42%	3.01	2.00	1	2.39
CT-Q.1 Computers and technology will eventually be used to limit personal freedom(ct1z)	2078	5	339/15.9%	5.21	5.00	5	2.9
CT-Q.1 Computers and technology control too much of our lives already(ct1ab)	2079	1	362/16.9%	4.98	5.00	1	2.9
CT-Q.1 I prefer to use an ATM machine for all my banking needs(ct1g)	2063	1	886/41.5%	3.53	2.00	1	3.0
CT-Q.1 I use ATMs for all my banking including deposits and transfers(ct1l)	2055	1	1035/48.5%	3.25	1.00	1	3.0
CT-Q.1 I am very comfortable using an ATM to make deposits or pay bills(ct1w)	2078	1	707/33.1%	4.71	4.00	1	3.5
CT-Q.1 I prefer to deal directly with a teller for my banking needs(ct1y)	2065	10	615/28.8%	6.80	8.00	10	3.0

III. Factor Analysis

1. Correlation Coefficients

To make sure the item groupings that we proposed are reasonable, we ran an inter-item correlation of every grouping. Due to the quality of the data we collected, there should be a relative positive relationship (r>0.2) among items within the same grouping.

Group 1. Belief in convenience of shopping

Correlations[b]

		SHP-Q.1 Saving time is more important than saving a few dollars	SHP-Q.1 I would pay more for convenience
SHP-Q.1 Saving time is more important than saving a few dollars	Pearson Correlation	1	.402**
	Sig. (2-tailed)		.000
SHP-Q.1 I would pay more for convenience	Pearson Correlation	.402**	1
	Sig. (2-tailed)	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=2086

From the results, we can tell the correlation between 2 items that we test, $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other and with $r = 0.4$, it is considered as a moderate relationship.

Group 2. Preference for personal service

From the results, we can tell the correlation between 2 items that we test, $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other. ($r = 0.302$)

Correlations[b]

		SHP-Q.1 I like being left alone when I shop	SHP-Q.1 If I never had to deal with a salesperson in a store, I'd be very happy
SHP-Q.1 I like being left alone when I shop	Pearson Correlation	1	.302**
	Sig. (2-tailed)		.000
SHP-Q.1 If I never had to deal with a salesperson in a store, I'd be very happy	Pearson Correlation	.302**	1
	Sig. (2-tailed)	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=2084

Group 3. Preference of shopping through catalog

Correlations[b]

			reversed sh12	reversed sh30
Spearman's rho	reversed sh12	Correlation Coefficient	1.000	.327**
		Sig. (2-tailed)	.	.000
	reversed sh30	Correlation Coefficient	.327**	1.000
		Sig. (2-tailed)	.000	.

**. Correlation is significant at the 0.01 level (2-tailed).

From the results, we can tell the correlation between 2 items that we test, $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other at an acceptable level. ($r = 0.327$)

Group 4. Perceived convenience of shopping by mail

Correlations[b]

		SHP-Q.1 I like to shop by mail so that I don't have to deal with salespeople	SHP-Q.1 I'm too busy to shop in stores, so buying through the mail is a real convenience
SHP-Q.1 I like to shop by mail so that I don't have to deal with salespeople	Pearson Correlation	1	.593**
	Sig. (2-tailed)		.000
SHP-Q.1 I'm too busy to shop in stores, so buying through the mail is a real convenience	Pearson Correlation	.593**	1
	Sig. (2-tailed)	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=2066

From the results, we can tell the correlation between 2 items that we test, $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other. ($r = 0.593$)

Group 5. Perceived entertainment from TV

Correlations[b]

		TV-Q.2 I Watch TV to be Entertained	TV-Q.2 I Watch TV Because I Enjoy It	TV-Q.2 I Watch TV to Relax or Unwind	TV-Q.2 I Watch TV To Cheer Me Up When I'm Feeling Down	TV-Q.2 I Watch TV Because It Keeps Me Company
TV-Q.2 I Watch TV to be Entertained	Pearson Correlation	1	.470**	.407**	.244**	.210**
	Sig. (2-tailed)		.000	.000	.000	.000
TV-Q.2 I Watch TV Because I Enjoy It	Pearson Correlation	.470**	1	.355**	.249**	.281**
	Sig. (2-tailed)	.000		.000	.000	.000
TV-Q.2 I Watch TV to Relax or Unwind	Pearson Correlation	.407**	.355**	1	.403**	.305**
	Sig. (2-tailed)	.000	.000		.000	.000
TV-Q.2 I Watch TV To Cheer Me Up When I'm Feeling Down	Pearson Correlation	.244**	.249**	.403**	1	.437**
	Sig. (2-tailed)	.000	.000	.000		.000
TV-Q.2 I Watch TV Because It Keeps Me Company	Pearson Correlation	.210**	.281**	.305**	.437**	1
	Sig. (2-tailed)	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=2025

We can tell all the correlations have $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other.

Group 6. Dependency on TV

Correlations[b]

		TV-Q.9 I Would Love To Be Able To Watch TV 24 Hours a Day	TV-Q.9 I'm a Real "Couch Potato"	reversed tv10
TV-Q.9 I Would Love To Be Able To Watch TV 24 Hours a Day	Pearson Correlation	1	.363**	.277**
	Sig. (2-tailed)		.000	.000
TV-Q.9 I'm a Real "Couch Potato"	Pearson Correlation	.363**	1	.293**
	Sig. (2-tailed)	.000		.000
reversed tv10	Pearson Correlation	.277**	.293**	1
	Sig. (2-tailed)	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=1723

We can tell all the correlations have $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other.

Group 7. Perceived entertainment from radio

We can tell all the correlations have $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other.

Correlations[b]

		RAD-Q.5 Reasons for Listening to Radio-To Be Entertained	RAD-Q.5 Reasons For Listening To Radio-Because I Enjoy It	RAD-Q.5 Reasons for Listening To Radio-To Relax Or Unwind	RAD-Q.5 Reasons For Listening To Radio-To Cheer Me Up When I'm Feeling Down
RAD-Q.5 Reasons for Listening to Radio-To Be Entertained	Pearson Correlation	1	.478**	.400**	.291**
	Sig. (2-tailed)		.000	.000	.000
RAD-Q.5 Reasons For Listening To Radio-Because I Enjoy It	Pearson Correlation	.478**	1	.445**	.279**
	Sig. (2-tailed)	.000		.000	.000
RAD-Q.5 Reasons for Listening To Radio-To Relax Or Unwind	Pearson Correlation	.400**	.445**	1	.470**
	Sig. (2-tailed)	.000	.000		.000
RAD-Q.5 Reasons For Listening To Radio-To Cheer Me Up When I'm Feeling Down	Pearson Correlation	.291**	.279**	.470**	1
	Sig. (2-tailed)	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=1848

Group 8. Dependency on telephone

Correlations[b]

		reversed te7	reversed ct1d	CT-Q.1 The telephone is an essential part of my daily living -- I couldn't do without
reversed te7	Pearson Correlation	1	.257**	.414**
	Sig. (2-tailed)		.000	.000
reversed ct1d	Pearson Correlation	.257**	1	.251**
	Sig. (2-tailed)	.000		.000
CT-Q.1 The telephone is an essential part of my daily living -- I couldn't do without	Pearson Correlation	.414**	.251**	1
	Sig. (2-tailed)	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=2038

We can tell all the correlations have $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other.

Group 9. Openness to new things

Correlations[b]

		CT-Q.1 I love cutting edge, high tech things	YL-Q.1 Psychographics-I am Usually the First to Try New Things	SHP-Q.1 like to try new products when they first come out	SHP-Q.1 I am very interested in any new products and services
CT-Q.1 I love cutting edge, high tech things	Pearson Correlation	1	.315**	.236**	.361**
	Sig. (2-tailed)		.000	.000	.000
YL-Q.1 Psychographics-I am Usually the First to Try New Things	Pearson Correlation	.315**	1	.363**	.360**
	Sig. (2-tailed)	.000		.000	.000
SHP-Q.1 like to try new products when they first come out	Pearson Correlation	.236**	.363**	1	.447**
	Sig. (2-tailed)	.000	.000		.000
SHP-Q.1 I am very interested in any new products and services	Pearson Correlation	.361**	.360**	.447**	1
	Sig. (2-tailed)	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=2002

We can tell all the correlations have $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other.

Group 10. Perception of how technologies contribute to life

We can tell all the correlations have $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other.

Correlations[b]

		reversed ct1z	reversed ct1ab	reversed ct1m
reversed ct1z	Pearson Correlation	1	.541**	.393**
	Sig. (2-tailed)		.000	.000
reversed ct1ab	Pearson Correlation	.541**	1	.452**
	Sig. (2-tailed)	.000		.000
reversed ct1m	Pearson Correlation	.393**	.452**	1
	Sig. (2-tailed)	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=2039

Group 11. Attitude towards Interactive Technology

Correlations[b]

		CT-Q.1 I prefer to use an ATM machine for all my banking needs	CT-Q.1 I use ATMs for all my banking including deposits and transfers	CT-Q.1 I am very comfortable using an ATM to make deposits or pay bills	reversed ct1y CT-Q.1 I prefer to deal directly with a teller for my banking needs
CT-Q.1 I prefer to use an ATM machine for all my banking needs	Pearson Correlation	1	.746**	.654**	.446**
	Sig. (2-tailed)		.000	.000	.000
CT-Q.1 I use ATMs for all my banking including deposits and transfers	Pearson Correlation	.746**	1	.638**	.417**
	Sig. (2-tailed)	.000		.000	.000
CT-Q.1 I am very comfortable using an ATM to make deposits or pay bills	Pearson Correlation	.654**	.638**	1	.427**
	Sig. (2-tailed)	.000	.000		.000
reversed ct1y CT-Q.1 I prefer to deal directly with a teller for my banking needs	Pearson Correlation	.446**	.417**	.427**	1
	Sig. (2-tailed)	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=1985

We can tell all the correlations have $r > 0.2$, $p < 0.05$, which means these items are significantly related with each other.

Dependent Variable

Correlations

		FUT-Q.2 Look through catalogs and order items using your remote	FUT-Q.2 See a "video" shopping mall and have a salesperson demonstrate the products for you	FUT-Q.2 See grocery store items, order them, and have them delivered to your home	FUT-Q.2 Look at the menus of local restaurants and order food to be delivered to your home
FUT-Q.2 Look through catalogs and order items using your remote	Pearson Correlation	1	.699**	.575**	.547**
	Sig. (2-tailed)		.000	.000	.000
	N	2037	2013	2013	2015
FUT-Q.2 See a "video" shopping mall and have a salesperson demonstrate the products for you	Pearson Correlation	.699**	1	.624**	.534**
	Sig. (2-tailed)	.000		.000	.000
	N	2013	2024	2003	2008
FUT-Q.2 See grocery store items, order them, and have them delivered to your home	Pearson Correlation	.575**	.624**	1	.663**
	Sig. (2-tailed)	.000	.000		.000
	N	2013	2003	2025	2008
FUT-Q.2 Look at the menus of local restaurants and order food to be delivered to your home	Pearson Correlation	.547**	.534**	.663**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	2015	2008	2008	2042

**. Correlation is significant at the 0.01 level (2-tailed).

We can tell all the correlations have $r > 0.50$, $p < 0.05$, which means these items are significantly related with each other.

2. Factor Analysis (Dimension reduction)

We used our proposed groupings of variables to measure people's intention to use new shopping interactive technology. We used SPSS Version 22 to generate simple statistics.

A Factor list with 34 Likert scale questions from this attitude survey questionnaire was conducted on data gathered from 1285 participants. An examination of the correlation coefficient test of sampling adequacy suggested that the sample was factorable before.

The results of an orthogonal rotation of the solution are shown in table below. When loadings less than 0.40 were excluded, the analysis yielded an eight-factor solution with a simple structure (factor loadings ≥.40).

Eight items loaded onto Factor 1. It is clear that these six items all relate to respondents' dependency on TV and perceived entertainment of TV. Thus we combine these two groups into one factor and name it "attitude towards TV"(measured by eight Likert Scale questions).

Items for Factor 2 represented the respondents' attitude towards interactive technology. The factor was labeled as "attitudes towards interactive technology"(measured by four Likert Scale questions).

Six items loaded onto Factor 3. Two groups that we proposed before were loaded on this factor. It is clear that these two groups doesn't belong to one factor, which we will discuss the solution further in the following part.

Items for Factor 4 represented the respondents' perceived radio entertainment. The factor was labeled as "perceived entertainment from radio"(measured by four Likert Scale questions).

Items for Factor 5 represented the respondents' perceived contribution of technology. The factor was labeled as "perceived contribution of technology"(measured by three Likert Scale questions).

Four items loaded onto Factor 6. It is clear that these six items all relate to respondents' preference of shopping through catalog and perceived convenience of shopping by mail. Thus we combine these two groups into one factor and name it "perceived preference of shopping by mail"(measured by four Likert Scale questions).

Items for Factor 7 represented the respondents' dependency on telephone. The factor was labeled as "dependency on telephone" (measured by three Likert Scale questions).

Items for Factor 8 represented the respondents' preference for personal service. The factor was labeled as " preference for personal service"(measured by two Likert Scale questions).

Meanwhile, by looking at the table of "total variance explained", we can tell 53.6% of total variance is explained by total eight factors we explained.

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.767	11.080	11.080	2.885	8.486	8.486
2	3.381	9.945	21.024	2.831	8.325	16.811
3	2.352	6.919	27.943	2.391	7.033	23.844
4	2.086	6.134	34.077	2.375	6.984	30.828
5	1.953	5.745	39.822	2.231	6.562	37.390
6	1.766	5.195	45.017	2.213	6.508	43.899
7	1.593	4.686	49.703	1.779	5.232	49.130
8	1.326	3.900	53.603	1.521	4.473	53.603
9	1.197	3.522	57.124			
10	1.136	3.342	60.466			
11	.907	2.667	63.133			
12	.824	2.425	65.558			
13	.804	2.364	67.923			
14	.775	2.280	70.202			
15	.700	2.057	72.260			
16	.694	2.040	74.300			
17	.663	1.950	76.250			
18	.653	1.921	78.171			
19	.613	1.802	79.973			
20	.605	1.780	81.753			
21	.587	1.727	83.481			
22	.564	1.657	85.138			
23	.533	1.568	86.707			
24	.531	1.563	88.269			
25	.500	1.470	89.740			
26	.476	1.399	91.138			
27	.453	1.332	92.470			
28	.428	1.259	93.729			
29	.421	1.239	94.969			
30	.392	1.152	96.120			
31	.380	1.117	97.237			
32	.366	1.077	98.314			
33	.333	.981	99.295			
34	.240	.705	100.000			

Extraction Method: Principal Component Analysis.

	1	2	3	4	5	6	7	8
SHP-Q.1 Saving time is more important than saving a few dollars	-0.053	-0.017	0.514	-0.110	0.016	0.192	0.034	0.244
SHP-Q.1 I would pay more for convenience	0.129	0.067	0.431	0.010	-0.020	0.207	0.131	0.281
SHP-Q.1 I like being left alone when I shop	-0.015	-0.008	-0.058	-0.001	-0.048	0.011	0.018	0.729
SHP-Q.1 If I never had to deal with a salesperson in a store, I'd be very happy	0.080	0.120	0.068	0.032	-0.177	0.057	-0.128	0.586
reversed sh12 SHP-Q.1 I am more likely to buy something sold in a store than sold in a catalog	-0.072	-0.004	-0.075	-0.021	0.125	0.760	-0.047	-0.150
reversed sh30 SHP-Q.1 Generally, products and services offered through the mail turn out to be disappointing when I receive them	-0.077	0.006	-0.061	-0.053	0.220	0.420	-0.051	-0.351
SHP-Q.1 I like to shop by mail so that I don't have to deal with salespeople	0.049	0.091	0.130	0.002	-0.091	0.773	0.006	0.195
SHP-Q.1 I'm too busy to shop in stores, so buying through the mail is a real convenience	-0.010	0.040	0.164	-0.001	-0.011	0.807	-0.002	0.121
TV-Q.2 I Watch TV to be Entertained	0.462	-0.079	0.046	0.240	0.282	-0.165	-0.015	0.245
TV-Q.2 I Watch TV Because I Enjoy It	0.531	-0.079	-0.017	0.154	0.263	-0.179	0.083	0.202
TV-Q.2 I Watch TV Because It Keeps Me Company	0.638	0.010	-0.039	0.124	-0.176	-0.005	0.075	-0.042
TV-Q.2 I Watch TV To Cheer Me Up When I'm Feeling Down	0.664	0.020	0.015	0.283	-0.119	0.039	0.009	-0.103
TV-Q.2 I Watch TV to Relax or Unwind	0.527	0.074	0.064	0.269	0.123	-0.047	-0.016	0.152
TV-Q.9 I Would Love To Be Able To Watch TV 24 Hours a Day	0.593	0.036	0.187	-0.066	-0.124	0.034	-0.098	-0.107
TV-Q.9 I'm a Real "Couch Potato"	0.624	0.014	0.027	-0.144	-0.004	0.033	-0.085	0.081
reversed tv10 TV-Q.10 Feeling If TV Did Not Exist	0.622	-0.058	-0.016	-0.143	-0.011	0.002	0.252	0.002
RAD-Q.5 Reasons for Listening to Radio-To Be Entertained	0.037	0.023	0.073	0.699	0.125	-0.050	0.000	0.154
RAD-Q.5 Reasons For Listening To Radio-Because I Enjoy It	-0.053	-0.046	0.038	0.754	0.051	-0.059	0.092	0.019
RAD-Q.5 Reasons for Listening To Radio-To Relax Or Unwind	0.083	0.017	0.067	0.759	-0.044	0.043	-0.001	-0.028
RAD-Q.5 Reasons For Listening To Radio-To Cheer Me Up When I'm Feeling Down	0.269	0.012	0.056	0.610	-0.227	0.030	-0.009	-0.141

reversed te7 TEL-Q.7 Feeling If Telephones Did Not Exist	0.048	0.008	0.050	-0.048	0.055	0.061	0.788	0.002
CT-Q.1 The telephone is an essential part of my daily living -- I couldn't do without	0.065	0.091	0.117	0.042	-0.058	-0.023	0.799	0.084
reversed ct1d CT-Q.1 Talking on the telephone is a waste of time for me	-0.023	-0.035	-0.066	0.106	0.169	-0.110	0.605	-0.167
CT-Q.1 I love cutting edge, high tech things	0.002	0.316	0.550	0.027	0.202	0.017	0.016	0.027
YL-Q.1 Psychographics-I am Usually the First to Try New Things	0.027	0.100	0.662	0.035	-0.020	-0.059	-0.023	-0.178
SHP-Q.1 like to try new products when they first come out	0.078	-0.043	0.688	0.127	-0.014	0.084	-0.004	-0.073
SHP-Q.1 I am very interested in any new products and services	0.052	0.028	0.735	0.145	0.104	-0.090	0.039	0.034

reversed ct1z CT-Q.1 Computers and technology will eventually be used to limit personal freedom	-0.013	0.085	0.020	-0.005	0.748	0.044	0.005	-0.091
reversed ct1ab CT-Q.1 Computers and technology control too much of our lives already	-0.041	0.156	0.126	-0.030	0.758	0.062	0.047	-0.106
reversed ct1m CT-Q.1 Computers and technology will ruin the quality of my life	-0.041	0.053	0.047	0.017	0.699	0.012	0.102	-0.073
CT-Q.1 I prefer to use an ATM machine for all my banking needs	0.007	0.876	0.109	-0.003	0.022	0.050	0.044	0.059
CT-Q.1 I use ATMs for all my banking including deposits and transfers	0.045	0.864	0.094	-0.017	-0.037	0.018	0.060	0.034
CT-Q.1 I am very comfortable using an ATM to make deposits or pay bills	-0.030	0.828	0.083	0.052	0.084	-0.016	-0.003	0.065
reversed ct1y CT-Q.1 I prefer to deal directly with a teller for my banking needs	-0.020	0.649	-0.035	-0.039	0.331	0.099	-0.045	-0.055

Table 4 Factor Groupings

Factor 1	Preference for personal service	sh28	SHP-Q.1 I like being left alone when I shop
		sh33	SHP-Q.1 If I never had to deal with a salesperson in a store, I'd be very happy
Factor 2	Preference of shopping through catalog	sh12	SHP-Q.1 I am more likely to buy something sold in a store than sold in a catalog
		sh30	SHP-Q.1 Generally, products and services offered through the mail turn out to be disappointing when I receive them
	Perceived convenience of shopping by mail	sh19	SHP-Q.1 I like to shop by mail so that I don't have to deal with salespeople
		sh23	SHP-Q.1 I'm too busy to shop in stores, so buying through the mail is a real convenience
Factor 3	Perceived entertainment from TV	tv2a	TV-Q.2 I Watch TV to be Entertained
		tv2g	TV-Q.2 I Watch TV Because I Enjoy It
		tv2m	TV-Q.2 I Watch TV to Relax or Unwind
		tv2k	TV-Q.2 I Watch TV To Cheer Me Up When I'm Feeling Down
		tv2h	TV-Q.2 I Watch TV Because It Keeps Me Company
	Dependency on TV	tv9c	TV-Q.9 I Would Love To Be Able To Watch TV 24 Hours a Day
		tv9i	TV-Q.9 I'm a Real "Couch Potato"
		tv10	TV-Q.10 Feeling If TV Did Not Exist
Factor 4	Perceived entertainment from radio	rd5a	RAD-Q.5 Reasons for Listening to Radio-To Be Entertained
		rd5e	RAD-Q.5 Reasons For Listening To Radio-Because I Enjoy It
		rd5g	RAD-Q.5 Reasons for Listening To Radio-To Relax Or Unwind
		re5k	RAD-Q.5 Reasons For Listening To Radio-To Cheer Me Up When I'm Feeling Down
Factor 5	Dependency on telephone	te7	TEL-Q.7 Feeling If Telephones Did Not Exist
		ct1c	CT-Q.1 The telephone is an essential part of my daily living -- I couldn't do without
		ct1d	CT-Q.1 Talking on the telephone is a waste of time for me
Factor 6	Openness to new things	ct1v	CT-Q.1 I love cutting edge, high tech things
		yl58	YL-Q.1 Psychographics-I am Usually the First to Try New Things
		sh15	SHP-Q.1 I am very interested in any new products and services
		sh4	SHP-Q.1 I like to try new products when they first come out
Factor 7	Perception of how tech contribute to life	ct1m	CT-Q.1 Computers and technology will ruin the quality of my life
		ct1z	CT-Q.1 Computers and technology will eventually be used to limit personal freedom
		ct1ab	CT-Q.1 Computers and technology control too much of our lives already
Factor 8	Attitude towards Interactive Technology	ct1g	CT-Q.1 I prefer to use an ATM machine for all my banking needs
		ct1l	CT-Q.1 I use ATMs for all my banking including deposits and transfers
		ct1w	CT-Q.1 I am very comfortable using an ATM to make deposits or pay bills
		ct1y	CT-Q.1 I prefer to deal directly with a teller for my banking needs

IV. Multiple regression

1. Reliability test of each factor (Analyze-scale)

We tested the reliability of each factor and range of frequencies after we checked the outliers by running the frequencies of each items, tested the factorable by running the correlation coefficient and did the factor analysis.

Table 5 Cronbach's Alpha

Factor	Cronbach's Alpha	Number of Items	Items removed
Preference for Personal Service During Shopping	0.464 (unacceptable)	2	
Preference of Shopping by Mail	0.657 (good)	4	None
Attitude towards TV	0.739 (very good)	8	None
Perceived Entertainment from Radio	0.710 (very good)	4	None
Dependency on Telephone	0.575 (mediocre)	3	None
Perceived Openness to new things	0.673 (good)	4	None
Perceived Contribution of New Technology	0.720 (very good)	3	2 sh16 Saving time is more important than saving a few dollars. sh 26 I would pay more for convenience.
Attitude towards Interactive Technology	0.831 (excellent)	4	None
Dependent Variable	0.860 (excellent)	4	None

The factor of Preference for Personal Service During Shopping consists of two ten-point Likert type questions. Cronbach's Alpha reliability for these items is 0.464, which is unacceptable. Since there are only two items in this factor, we cannot improve the reliability by removing an item, thus we decided to not use this factor in multiple regression.

The next factor, Preference of Shopping by Mail, consists of four ten-point Likert type questions, with a good Cronbach's Alpha reliability of 0.657, between 0.6 and 0.69. The third factor, Attitude towards TV, consists of eight five-point Likert type questions. It has a Cronbach's Alpha reliability of 0.739, between 0.7-0.79, which indicates it is very good. The

four questions measuring Perceived Entertainment from Radio are all ten-point Likert-type, yielded a Cronbach's Alpha of 0.710, between 0.7-0.79, as such this is considered very good.

The next factor Attitude towards Telephone is also measured through three items that used a ten-point Likert scale, which yielded a Cronbach's Alpha of 0.575, which is mediocre. The factor, Perceived Openness to new things, consists of four ten-point Likert type questions. It has a Cronbach's Alpha reliability of 0.673, which indicates it is good.

Our next factor, Perceived Contribution of New Technology to life contains five ten-point Likert-type questions. However, when we go through the items, we find the first two measurements, sh16 Saving time is more important than saving a few dollars and sh 26 I would pay more for convenience, are not overlapping with other three items. We first test the reliability among these five items and get a Cronbach's Alpha of 0.550, which is acceptable. But after we remove item sh16 and sh26, we get a Cronbach's Alpha of 0.720, which is very good. Thus we remove these two items from this factor.

The four ten-point Likert type questions measuring the Attitude towards Interactive Technology yielded a Cronbach's Alpha reliability of 0.831, larger than 0.8 indicating an excellent internal consistency.

Since our dependent variable "the purchase intention of ESI's new interactive home shopping device" is also measured by multiple measurements, we also test the reliability among the four measures. A Cronbach's Alpha reliability of 0.860, larger than 0.8, indicates an excellent internal consistency.

2. True score computing and frequency descriptions

Factor 1. Perceived preference of shopping by mail

Perceived perference of shopping by mail

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	182	8.5	9.0	9.0
	2	337	15.8	16.7	25.8
	3	453	21.2	22.5	48.2
	4	379	17.7	18.8	67.0
	5	301	14.1	14.9	82.0
	6	186	8.7	9.2	91.2
	7	100	4.7	5.0	96.2
	8	47	2.2	2.3	98.5
	9	23	1.1	1.1	99.7
	10	7	.3	.3	100.0
	Total	2015	94.3	100.0	
Missing	System	121	5.7		
Total		2136	100.0		

Respondents who are the least likely to shop by mail represent 48%; people who feel neutral for shopping by mail take 48% of the total respondents; 4.0% of the respondents feel positive towards shopping by mail.

From this answer distribution, we can see there are no outliers and 4% of the respondents have positive attitudes in terms of shopping by mail.

The max sampling error is ± 2.1%(95% confidence interval), inferring a range of 1.9%-6.1% in the whole population. With a mean of 3.82, median of 4 and mode of 3, we could indicate a small portion of whole population positive attitudes towards shopping by mail.

Factor 2. Attitudes towards TV

Attitude towards TV

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	.3	.4	.4
	2	42	2.0	2.5	2.9
	3	144	6.7	8.6	11.4
	4	347	16.2	20.7	32.1
	5	469	22.0	28.0	60.1
	6	329	15.4	19.6	79.7
	7	228	10.7	13.6	93.3
	8	70	3.3	4.2	97.5
	9	34	1.6	2.0	99.5
	10	8	.4	.5	100.0
	Total	1677	78.5	100.0	
Missing	System	459	21.5		
Total		2136	100.0		

11% of the respondents have negative feelings towards TV; 82% of the respondents got a true score between 4 and 7, meaning they feel neutral about TV; 7% of the respondents got a true score between 8 and 10, which means they feel positive towards TV.

From this answer distribution, we can see there are no outliers and 7% of the respondents have positive attitudes towards TV.

The max sampling error is ±1.6%(95% confidence interval), inferring a range of 5.4%-8.6% in the whole population. With a mean of 5.23, median of 5 and mode of 5, we could indicate a small portion of whole population positive attitudes towards TV.

Factor 3. Perceived entertainment from radio

Perceived entertainment from radio

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	19	.9	1.0	1.0
	2	31	1.5	1.7	2.7
	3	63	2.9	3.4	6.1
	4	119	5.6	6.4	12.6
	5	210	9.8	11.4	23.9
	6	322	15.1	17.4	41.3
	7	335	15.7	18.1	59.5
	8	363	17.0	19.6	79.1
	9	212	9.9	11.5	90.6
	10	174	8.1	9.4	100.0
	Total	1848	86.5	100.0	
Missing	System	288	13.5		
Total		2136	100.0		

We computed the true score of people's response towards perceived entertainment of radio. 6% of the respondents got a true score between 1 and 3 meaning they have negative feelings in terms of the perceived entertainment of radio; while 54% of the respondents got a true score between 4 and 7, which means they feel neutral towards radio entertainment; 40% of the respondents feel positive towards radio entertainment.

From this answer distribution, we can see there are no outliers and about 40% of the respondents feel positive in terms of the perceived radio entertainment.

The max sampling error is ±2.1%(95% confidence interval), inferring a range of 37.9%-42.1% in the whole population. With a mean of 6.83, median of 7 and mode of 7, we could indicate that a large group of people think using have positive feelings towards radio entertainment.

Factor 4. Dependency on telephone

Dependency on telephone

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	.6	.6	.6
	2	14	.7	.7	1.3
	3	49	2.3	2.4	3.7
	4	145	6.8	7.1	10.8
	5	198	9.3	9.7	20.5
	6	283	13.2	13.9	34.4
	7	341	16.0	16.7	51.1
	8	279	13.1	13.7	64.8
	9	313	14.7	15.4	80.2
	10	404	18.9	19.8	100.0
	Total	2038	95.4	100.0	
Missing	System	98	4.6		
Total		2136	100.0		

We computed the true score of people's dependency on telephone. 4% of the respondents got a true score between 1 and 3 meaning they don't have a strong dependency on telephone; while 47% of the respondents got a true score between 4 and 7, which means their dependency on telephone is at a neutral level; 49% of the respondents feel they have a strong dependency on telephone.

From this answer distribution, we can see there are no outliers and about 49% of the respondents have strong dependency on telephone.

The max sampling error is ±2.1%(95% confidence interval), inferring a range of 46.9%-51.1% in the whole population. With a mean of 7.33, median of 7 and mode of 10, we could indicate that a large group of people strongly depend on telephone very much.

Factor 5. Openness to new things

Openness to new things

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	28	1.3	1.4	1.4
	2	82	3.8	4.1	5.5
	3	199	9.3	9.9	15.4
	4	357	16.7	17.8	33.3
	5	417	19.5	20.8	54.1
	6	417	19.5	20.8	74.9
	7	263	12.3	13.1	88.1
	8	150	7.0	7.5	95.6
	9	74	3.5	3.7	99.3
	10	15	.7	.7	100.0
	Total	2002	93.7	100.0	
Missing	System	134	6.3		
Total		2136	100.0		

We computed the true score of people's dependency on telephone. 15% of the respondents got a true score between 1 and 3 meaning they don't have negative attitudes towards new things; while 73% of the respondents got a true score between 4 and 7, which means they feel neutral about new things; 12% of the respondents feel positive towards new things.

From this answer distribution, we can see there are no outliers and about 12% of the respondents open to new things.

The max sampling error is ±1.9%(95% confidence interval), inferring a range of 11.1%-13.9% in the whole population. With a mean of 5.33, median of 5.0 and mode of 5, we could indicate that a small portion of people open to new things.

Factor 6. Perceived contribution of technology

Perceived Contribution Of New Technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	29	1.4	1.4	1.4
	2	43	2.0	2.1	3.5
	3	107	5.0	5.2	8.8
	4	199	9.3	9.8	18.5
	5	246	11.5	12.1	30.6
	6	292	13.7	14.3	44.9
	7	380	17.8	18.6	63.6
	8	269	12.6	13.2	76.8
	9	248	11.6	12.2	88.9
	10	226	10.6	11.1	100.0
	Total	2039	95.5	100.0	
Missing	System	97	4.5		
Total		2136	100.0		

We computed the true score of people's attitudes towards new technology. 9% of the respondents got a true score between 1 and 3 meaning they don't have negative attitudes towards new technology; while 55% of the respondents got a true score between 4 and 7, which means they feel neutral about new technology; 36% of the respondents feel positive towards new technology.

From this answer distribution, we can see there are no outliers and about 36% of the respondents feel positive towards new technology.

The max sampling error is ±2% (95% confidence interval), inferring a range of 34%-38% in the whole population. We could indicate that a big group of people in whole population feel positive towards new tech. The mean of 6.63, median of 7 and mode of 7 also illustrate such conclusion.

Factor 7. Attitude towards interactive technology

Attiitue towards interactive technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	346	16.2	17.6	17.6
	2	258	12.1	13.2	30.8
	3	283	13.2	14.4	45.2
	4	278	13.0	14.2	59.4
	5	228	10.7	11.6	71.0
	6	182	8.5	9.3	80.3
	7	155	7.3	7.9	88.2
	8	125	5.9	6.4	94.6
	9	74	3.5	3.8	98.4
	10	32	1.5	1.6	100.0
	Total	1961	91.8	100.0	
Missing	System	175	8.2		
Total		2136	100.0		

We computed the true score of people's attitudes towards new technology. 45% of the respondents got a true score between 1 and 3 meaning they don't have negative attitudes towards interactive technology; while 43% of the respondents got a true score between 4 and 7, which means they feel neutral about interactive technology; 12% of the respondents feel positive towards interactive technology.

From this answer distribution, we can see there are no outliers and about 12% of the respondents feel positive towards interactive technology.

The max sampling error is ±2.1%(95% confidence interval), inferring a range of 9.9%-14.1% in the whole population. With a mean of 4.14, median of 4 and mode of 1, we could indicate that small group of people in whole population feel positive towards interactive technology.

Dependent Variable

Dependent Variable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	363	17.0	18.3	18.3
	2	174	8.1	8.8	27.0
	3	208	9.7	10.5	37.5
	4	200	9.4	10.1	47.6
	5	226	10.6	11.4	59.0
	6	211	9.9	10.6	69.6
	7	214	10.0	10.8	80.4
	8	166	7.8	8.4	88.7
	9	97	4.5	4.9	93.6
	10	127	5.9	6.4	100.0
	Total	1986	93.0	100.0	
Missing	System	150	7.0		
Total		2136	100.0		

We computed the true score of people's attitudes towards dependent variables, which is the variation of people's interest in shopping remotely using interactive technology. 38% of the respondents got a true score between 1 and 3 meaning they have little interest in shopping using interactive technology; while 42% of the respondents got a true score between 4 and 7, which means they feel neutral about shopping using interactive technology; 20% of the respondents have relatively strong interest in shopping using interactive technology.

From this answer distribution, we can see there are no outliers and about 20% of the respondents feel positive towards shopping using interactive technology.

The max sampling error is ±2.1%(95% confidence interval), inferring a range of 17.9%-22.1% in the whole population. We could indicate that 17.9%-22.1% of people in whole population have strong interest in shopping using interactive technology. With a mean of 4.78, median of 5.0 and mode of 1, we could see that not most people are interested in purchasing this product. Thus ESI need to work harder to build its reputation and promote its product.

Table 6 Sampling Error and Range

Factor	N	Most Frequent Responses	Alignment with Factor	95 CI SE	Range
Preference of Shopping by Mail	2015/ 2136	Don't like to shop by mail	48.2%	+/- 1.9%	46.3% - 50.1%
Attitude towards TV	1677/ 2136	Neutral attitude toward TV	81.9%	+/- 1.4%	80.5% - 83.3%
Perceived Entertainment from Radio	1848/ 2136	Slightly entertained by radio	53.3%	+/- 1.9%	51.4% - 55.2%
Dependency on Telephone	2038/ 2136	Very dependent on telephone	48.9%	+/- 1.9%	47% - 50.8%
Perceived Openness to new things	2002/ 2136	Slightly open to new things	72.5%	+/- 1.7%	70.8% - 74.2%
Perceived contribution of technology	2039/ 2136	Neutral attitude toward new technology	54.8%	+/- 1.9%	52.9% - 56.7%
Attitude towards Interactive Technology	1961/ 2136	Negative attitude toward interactive technology	45.2%	+/- 1.9%	43.4% - 47.1%
Dependent Variable	1986/ 2136	Slightly likely to buy the product	42.9%	+/- 1.9%	41% - 44.8%

Table 7 Analysis of Variation

Factor	N	Frequency	Alignment with Construct	Mean	Median	Mode	Std. Deviation
Preference of Shopping by Mail	2015/ 2136	972 Don't like to shop by mail 48.2% 966 Neutral attitude towards shopping by mail 47.9% 77 Prefer to shop by mail 3.7%	Not like to shop by mail + Neutral attitude towards shopping by mail= 96.4%	3.82	4.00	3	1.851
Attitude towards TV	1677/ 2136	192 Negative attitude toward TV 11.5% 1373 Neutral attitude toward TV 81.9% 112 Positive toward TV 6.7%	Neutral attitude toward TV= 81.9%	5.23	5.00	5	1.530
Perceived Entertainment from Radio	1848/ 2136	113 Don't be entertained by radio 6.1% 986 Slightly entertained by radio 53.3% 749 Really enjoy radio 40.5%	Slightly + Really enjoy radio = 93.9%	6.83	7.00	8	2.005
Dependency on Telephone	2038/ 2136	75 Not dependent on telephone 3.7% 967 Slightly dependent on telephone 47.4% 996 Very dependent on telephone 48.9%	Slightly dependent on telephone + Very dependent on telephone = 96.3%	7.33	7.00	10	2.090
Perceived Openness to new things	2002/ 2136	309 Not open to new things 15.4% 1454 Slightly open to new things 72.5% 239 Very open to new things 11.9%	Slightly open to new things = 72.5%	5.33	5.00	5	1.803
Perceived contribution of technology	2039/ 2136	179 Negative attitude toward new technology 8.7% 1117 Neutral attitude toward new technology 54.8% 743 Positive attitude toward new technology 36.5%	Neutral +positive attitude toward new technology = 91.3%	6.63	7.00	7	2.206
Attitude	1961/	887 Negative attitude	Negative + Neutral	4.14	4.00	1	2.448

towards Interactive Technology	2136	toward interactive technology 45.2% 843 Neutral attitude toward interactive technology 43% 231 Positive attitude toward interactive technology 11.8%	attitude toward interactive technology = 48.2%				
Dependent Variable	1986/ 2136	745 Not strong intention to buy the product 37.6% 851 Slightly likely to buy the product 42.9% 390 Strong intention to buy the product 19.7%	Slightly likely to buy the product= 42.9%	4.78	5.00	1	2.803

3. Multiple Regression

In order to find out what factors drives people's intention to purchase the new device of ESI the most, we select the several questions which measure the dependent variable "How likely are you going to buy the ESI shopping device," which asks people's intention to purchase the ESI's new device in the future. And intention could lead to action of buying the device.

The results of Multiple Regression are shown in the following forms:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.482[a]	.232	.228	2.407

a. Predictors: (Constant), Attitude towards interactive technology, Attitude towards TV, Dependency on telephone, Perceived preference of shopping by mail, Attitude towards new technology, Perceived entertainment from radio, Openness to new things

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.549	.471		-5.418	.000
	Perceived preference of shopping by mail	.250	.038	.166	6.517	.000
	Attitude towards TV	.325	.049	.175	6.680	.000
	Perceived entertainment from radio	.137	.037	.096	3.674	.000
	Dependency on telephone	.097	.033	.074	2.902	.004
	Openness to new things	.470	.042	.299	11.280	.000
	Perceived contribution of technology	.032	.034	.025	.951	.342
	Attitude towards interactive technology	.096	.029	.085	3.285	.001

a. Dependent Variable: Dependent Variable

By looking at R square, we found that four factor explained 23.2% of the total variance. By observing the p-value, we can tell there is no statistically significant between Factor 6 “Attitude towards new technology” and DV (p=0.342 > 0.05). We get rid of the factor “Attitude towards new technology” and here is the new result.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.483[a]	.233	.229	2.407

a. Predictors: (Constant), Attitude towards interactive technology, Attitude towards TV, Dependency on telephone, Perceived preference of shopping by mail, Perceived entertainment from radio, Openness to new things

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.402	.436		-5.510	.000
	Perceived preference of shopping by mail	.255	.038	.170	6.732	.000
	Attitude towards TV	.314	.048	.169	6.515	.000
	Perceived entertainment from radio	.140	.037	.099	3.801	.000
	Dependency on telephone	.100	.033	.076	3.028	.003
	Openness to new things	.477	.041	.302	11.599	.000
	Attitude towards interactive technology	.104	.029	.092	3.586	.000

a. Dependent Variable: Dependent Variable

R square tells that three factor explained 23.3% of the total variance.

There is a small positive and statistically significant association between an individual’s Perceived preference of shopping by mail and his or her intention to buy the ESI shopping device in the future (β =0.170, p = 0.000 <0.05). The more positive is a respondent attitude towards shopping by mail, the more likely he/she is to going to buy the device in the future.

There is a small positive and statistically significant association between an individual's Attitude towards TV and his or her intention to buy the new shopping device of ESI in the future (β =0.169, p = 0.000 <0.05). The more a positive attitude a respondent perceive toward TV, the more likely he/she is going to purchase the device in the future.

There is a negligent positive and statistically significant association between an individual's Perceived entertainment from radio and his or her intention to purchase the device of ESI in the future (β =0.099, p =0.000 <0.05). The more entertainment a respondent gain from radio, the more likely he/she is going to make a purchase of the ESI device in the future.

There is a negligent positive and statistically significant association between an individual's Perceived entertainment from radio and his or her intention to buy the ESI device in the future (β =0.099, p =0.000 <0.05). The more entertainment a respondent gain from radio, the more likely he/she is going to make a purchase of the ESI device in the future.

The association between people's dependency on telephone and their purchase intention of the new ESI shopping device is negligent and statistically significant, with a β =0.076, p =0.003 <0.05, which means the more people are dependent on their telephones, the higher the probability they are going to buy the ESI shopping device.

A β =0.302 and a p =0.000 <0.05 illustrate that the association between respondents' Openness to new things are moderately and significantly related to their likeliness to purchase the ESI shopping device. The more easily they can accept new things, the more likely they will buy the device of ESI.

With a β =0.092 and a p =0.000 <0.05, the Attitude towards interactive technology is negligent positively and significantly associated with people's future purchase intention of the

new device of ESI. The more comfortable they feel to deal with interactive technologies, the more likely they will purchase ESI shopping devices.

By comparing the weight of these six factors, we can see that people's Openness to new things is the biggest driver of their future purchasing of ESI's shopping devices, then the Perceived preference of shopping by mail, and Attitude towards TV. The other three factors, Perceived entertainment from radio, Dependency on telephone and Attitude towards interactive technology do not contribute a lot to people's purchase intention.

4. Cluster analysis

In order to identify potential customers more precisely, we decide to find customer types that can represent homogenous marketing segments. Identify their particular needs in that homogenous group allows products to be designed with greater precision and more appealing within the group. Targeting specific groups of people is cheaper and more accurate than broad-scale marketing. Customers also respond better to product that addresses their specific needs.

By looking at the results of MR analysis, we can identify top 3 factors that predict our dependent variables the best. They are “attitude towards TV”, “preference for shopping by mail” and “openness to new things”. Combining DV and these three top predictors, we identify respondents by three clusters.

Final Cluster Centers

	Cluster		
	1	2	3
DV	7.74	5.12	2.33
attitudetowardsTV	5.78	4.81	4.95
preferenceforshoppingbymail	3.50	5.87	2.95
opennesstonewthings	6.36	5.58	4.54

Number of Cases in each Cluster

Cluster	1	513.000
	2	357.000
	3	602.000
Valid		1472.000
Missing		664.000

We can see from the table that cluster 1 has the highest DV score (7.74) among three clusters, meaning people in cluster 1 are most likely to buy ESI’s new product. They have the highest score regarding their attitude towards TV, the highest score in terms of their openness to

new things, and the second highest score in “preference for shopping by mail”. Taking these scores into account, we label people in cluster 1 the “trendy TV lovers” as they have relatively positive attitudes towards TV and are more open to new things.

Cluster 2 has the second highest DV score (5.12) among three clusters, which means people in this cluster have neutral attitude towards ESI’s new product. They are not TV lovers but they are open to new things and they love shopping by mail. Thus we label this group of people “remote shopping maniacs”.

Cluster 3 has the lowest DV score (2.33), meaning people in this group are the least likely to shop using interactive products. They have the lowest scores accessed by predictors “preference for shopping by mail” and “openness to new things”, and they also have a relatively low score in terms of their attitudes towards TV. These scores indicate this group of people are not fans of TV, do not prefer shopping by mail and resist new things. We name this group of people “old-fashioned conservatives.”

- Cluster 1 = Trendy TV Lovers
- Cluster 2 = Remote shopping maniacs
- Cluster 3 = old-fashioned conservatives

V. Segmentation Descriptions

In this part, we describe the characters of each cluster, and give advice to the ESI Company according to such characters. Before we do the description, we discussed what kind of variables we need and found them in both the telephone and mail questionnaire. We first run frequency descriptions, to make sure there were no outliers as well as entry mistakes. Such process also made sure all the descriptors have enough sample size (a descriptor with sample size larger than 300 will be considered as valid). All the frequency outputs are attached in the Appendix C part. In agreement with different measurement levels of the descriptors, we use either chi-square or ANOVA test to analyze the data.

1. Demographics

Age

Cluster Number of Case * recoded age group

Crosstab

			recoded age group			Total
			1.00	2.00	3.00	
Cluster Number of Case	1	Count	195	174	33	402
		% within Cluster Number of Case	48.5%	43.3%	8.2%	100.0%
	2	Count	79	153	39	271
		% within Cluster Number of Case	29.2%	56.5%	14.4%	100.0%
	3	Count	105	233	136	474
		% within Cluster Number of Case	22.2%	49.2%	28.7%	100.0%
Total		Count	379	560	208	1147
		% within Cluster Number of Case	33.0%	48.8%	18.1%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	106.193[a]	4	.000
Likelihood Ratio	106.127	4	.000
Linear-by-Linear Association	97.207	1	.000
N of Valid Cases	1147		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 49.14.

We recoded original age groups into 3 groups. They are young adults who are at ages between 16 and 29; mid-age adults who are at ages between 30 and 59 and the elders who are at ages between 60 and 74.

From the table we can tell, age and people's intention to use ESI new products are correlated at a significant level (df=4, $p<0.05$). Young adults represent 49% of trendy TV lovers while 8% of people in this group are older who are between 60 and 74 years old. For remote shopping maniacs, mid-age adults consist 57% of this group; and 49% of old-fashioned conservatives are mid-age people. We can conclude from this that young people are more likely to buy ESI's new product.

Educational level

Cluster Number of Case * Q.63 Education of Respondent

Crosstab

			Q.63 Education of Respondent								
			grade school or less	some high school	high school graduate	vocational / technical	some college	college graduate	post graduate	refused	Total
Cluster Number of Case	1	Count	10	56	127	19	149	117	32	3	513
		% within Cluster Number of Case	1.9%	10.9%	24.8%	3.7%	29.0%	22.8%	6.2%	0.6%	100.0%
	2	Count	3	17	78	14	94	100	49	2	357
		% within Cluster Number of Case	0.8%	4.8%	21.8%	3.9%	26.3%	28.0%	13.7%	0.6%	100.0%
	3	Count	16	52	222	22	129	108	52	1	602
		% within Cluster Number of Case	2.7%	8.6%	36.9%	3.7%	21.4%	17.9%	8.6%	0.2%	100.0%
Total		Count	29	125	427	55	372	325	133	6	1472
		% within Cluster Number of Case	2.0%	8.5%	29.0%	3.7%	25.3%	22.1%	9.0%	0.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	67.325[a]	14	.000
Likelihood Ratio	67.832	14	.000
Linear-by-Linear Association	6.034	1	.014
N of Valid Cases	1472		

a. 3 cells (12.5%) have expected count less than 5. The minimum expected count is 1.46.

We can tell from the table above that respondents' intention to shop using interactive technology and their educational level are correlated at a significant level (df=14, $p<0.05$).

People who went to college with a college degree (some college) represent 29% of trendy TV lovers, which is the biggest subgroup. For remote shopping maniacs, college graduates consist 28% of this group; and 29% of old-fashioned conservatives are high-school graduates. This indicates that the more education a person received, he or she is more likely to buy ESI's new product.

Whether currently employed

Cluster Number of Case * Q.65a Whether Presently Employed

Crosstab

			Q.65a Whether Presently Employed		
			yes	no	Total
Cluster Number of Case	1	Count	376	137	513
		% within Cluster Number of Case	73.3%	26.7%	100.0%
	2	Count	271	86	357
		% within Cluster Number of Case	75.9%	24.1%	100.0%
	3	Count	394	208	602
		% within Cluster Number of Case	65.4%	34.6%	100.0%
Total		Count	1041	431	1472
		% within Cluster Number of Case	70.7%	29.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.365[a]	2	.001
Likelihood Ratio	14.323	2	.001
Linear-by-Linear Association	8.784	1	.003
N of Valid Cases	1472		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 104.53.

From the table we can tell that respondents' employment status and their intention to use ESI's new products are correlated at a significant level(df=2, $p<0.05$).

Remote shopping maniacs have the highest employment rate, trendy TV lovers have the second highest employment rate and the old-fashioned conservatives have the lowest

employment rate among these three groups. We can conclude from this that employed people are more likely to shop using interactive technology.

Whether employed full-time or part-time

Cluster Number of Case * Q.65b Whether Employed Full-time or Part-time

Crosstab

			Q.65b Whether Employed Full-time or Part-time		
			full time	part time	Total
Cluster Number of Case	1	Count	290	86	376
		% within Cluster Number of Case	77.1%	22.9%	100.0%
	2	Count	238	33	271
		% within Cluster Number of Case	87.8%	12.2%	100.0%
	3	Count	322	72	394
		% within Cluster Number of Case	81.7%	18.3%	100.0%
Total		Count	850	191	1041
		% within Cluster Number of Case	81.7%	18.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.027[a]	2	.002
Likelihood Ratio	12.471	2	.002
Linear-by-Linear Association	2.594	1	.107
N of Valid Cases	1041		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 49.72.

From the table we can tell that whether the respondents are employed full-time or part-time and their intention to use ESI new products are correlated at a significant level (df=2, $p<0.05$).

More people in remote shopping maniacs (88%) than trendy TV lovers (77%) and old-fashioned conservatives(82%) are employed full-time relatively to part-time.

Marital status

Cluster Number of Case * Q.75 Marital Status

Crosstab

			Q.75 Marital Status						
			single, never married	married	divorced	separated	widowed	refused	Total
Cluster Number of Case	1	Count	186	242	59	12	11	3	513
		% within Cluster Number of Case	36.3%	47.2%	11.5%	2.3%	2.1%	0.6%	100.0%
	2	Count	92	220	26	4	14	1	357
		% within Cluster Number of Case	25.8%	61.6%	7.3%	1.1%	3.9%	0.3%	100.0%
	3	Count	125	376	48	12	40	1	602
		% within Cluster Number of Case	20.8%	62.5%	8.0%	2.0%	6.6%	0.2%	100.0%
Total		Count	403	838	133	28	65	5	1472
		% within Cluster Number of Case	27.4%	56.9%	9.0%	1.9%	4.4%	0.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	59.468[a]	10	.000
Likelihood Ratio	59.859	10	.000
Linear-by-Linear Association	16.786	1	.000
N of Valid Cases	1472		

a. 3 cells (16.7%) have expected count less than 5. The minimum expected count is 1.21.

From the table we can tell that respondents' marital status and their intention to use ESI's new products are correlated at a significant level ($df=10$, $p<0.05$).

Among the trendy TV lovers, who are most likely to buy ESI's new products, 186 are single or never married, which is more than the other two groups. This group also has a low married rate(47.2%) rather than the other two groups. This indicates that people who are single or never married are more likely to buy ESI's new product.

Total household income

Cluster Number of Case * Q.79 Total Household Income

Crosstab

			Q.79 Total Household Income								
			under $15,000	$15,000 to under $25,000	$25,000 to under $35,000	$35,000 to under $50,000	$50,000 to under $75,000	$75,000 to under $100,000	$100,000 and over	refused	Total
Cluster Number of Case	1	Count	56	69	86	91	71	23	27	90	513
		% within Cluster Number of Case	10.9%	13.5%	16.8%	17.7%	13.8%	4.5%	5.3%	17.5%	100.0%
	2	Count	20	36	44	78	70	33	11	65	357
		% within Cluster Number of Case	5.6%	10.1%	12.3%	21.8%	19.6%	9.2%	3.1%	18.2%	100.0%
	3	Count	49	93	101	114	87	26	19	113	602
		% within Cluster Number of Case	8.1%	15.4%	16.8%	18.9%	14.5%	4.3%	3.2%	18.8%	100.0%
Total		Count	125	198	231	283	228	82	57	268	1472
		% within Cluster Number of Case	8.5%	13.5%	15.7%	19.2%	15.5%	5.6%	3.9%	18.2%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	38.066[a]	14	.001
Likelihood Ratio	36.960	14	.001
Linear-by-Linear Association	.017	1	.895
N of Valid Cases	1472		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 13.82.

From the table we can tell that respondents' total household income and their intention to use ESI's new products are correlated at a significant level ($df=14$, $p<0.05$).

We can see from the pattern that although most people in each group having household income between $35,000 and $50,000, old-fashioned conservatives have relatively low income than the other groups, which means people who have relatively high income are more likely to buy ESI's new product.

Race

When we were looking at data, we noted almost 90% of each cluster is Black people while White people only represent less than 10% of the sample population, which doesn't check with the facts of U.S. society's ethnicity stratification. Thus we flip-coded the data of White and Black people to reach a more precise conclusion.

From the table we can tell that respondents' race and their intention to use ESI's new products are correlated at a significant level ($df=8$, $p<0.05$).

We can tell from the table White people represent the largest proportion of each group, but Black people, Asian people have a slightly higher rate in trendy TV lovers than the other two groups, meaning they are more likely to buy ESI's new product.

Cluster Number of Case * Q.81 Race

Crosstab

			Q.81 Race					
			black	white	asian/oriental	other	refused	Total
Cluster Number of Case	1	Count	42	419	15	30	7	513
		% within Cluster Number of Case	8.2%	81.7%	2.9%	5.8%	1.4%	100.0%
	2	Count	12	332	2	8	3	357
		% within Cluster Number of Case	3.4%	93.0%	0.6%	2.2%	0.8%	100.0%
	3	Count	20	557	3	15	7	602
		% within Cluster Number of Case	3.3%	92.5%	0.5%	2.5%	1.2%	100.0%
Total		Count	74	1308	20	53	17	1472
		% within Cluster Number of Case	5.0%	88.9%	1.4%	3.6%	1.2%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	46.010[a]	8	.000
Likelihood Ratio	43.799	8	.000
Linear-by-Linear Association	2.018	1	.155
N of Valid Cases	1472		

a. 2 cells (13.3%) have expected count less than 5. The minimum expected count is 4.12.

Summery: *Buyer persona based on demographic characteristics*

Based on all the demographic characteristics that we found significantly related to respondents' intention to buy ESI's new product, we come up with a buyer persona of ESI's prospective customers: They are mainly White young adults, who went to college and currently employed. It's highly possible that they are single and have annual household income between $35,000 and $50,000 and even higher.

2. Psychographics

(1) TV Watching Habits

Preferred TV channels.

QCL_1*$q6 Crosstabulation

			preferences for TV channels[a]		
			Q.6 Program Choices Influencing Decision to Get Cable	Q.6 Program Choices Influencing Decision to Get Cable	Q.6 Program Choices Influencing Decision to Get Cable
Cluster Number of Case	1	Count	86	150	23
		% within QCL_1	23.0%	40.1%	6.1%
	2	Count	78	119	12
		% within QCL_1	32.1%	49.0%	4.9%
	3	Count	74	134	15
		% within QCL_1	19.3%	34.9%	3.9%
Total		Count	238	403	50

QCL_1*$q6 Crosstabulation

			preferences for TV channels[a]		
			Q.6 Program Choices Influencing Decision to Get Cable	Q.6 Program Choices Influencing Decision to Get Cable	Q.6 Program Choices Influencing Decision to Get Cable
Cluster Number of Case	1	Count	134	211	119
		% within QCL_1	35.8%	56.4%	31.8%
	2	Count	108	121	68
		% within QCL_1	44.4%	49.8%	28.0%
	3	Count	137	166	74
		% within QCL_1	35.7%	43.2%	19.3%
Total		Count	379	498	261

QCL_1*$q6 Crosstabulation

			preferences for TV channels[a]		
			Q.6 Program Choices Influencing Decision to Get Cable	Q.6 Program Choices Influencing Decision to Get Cable	Q.6 Program Choices Influencing Decision to Get Cable
Cluster Number of Case	1	Count	186	182	126
		% within QCL_1	49.7%	48.7%	33.7%
	2	Count	139	129	82
		% within QCL_1	57.2%	53.1%	33.7%
	3	Count	181	179	105
		% within QCL_1	47.1%	46.6%	27.3%
Total		Count	506	490	313

QCL_1*$q6 Crosstabulation

			preferences for TV channels[a]		
			Q.6 Program Choices Influencing Decision to Get Cable	Q.6 Program Choices Influencing Decision to Get Cable	Q.6 Program Choices Influencing Decision to Get Cable
Cluster Number of Case	1	Count	40	18	16
		% within QCL_1	10.7%	4.8%	4.3%
	2	Count	23	18	3
		% within QCL_1	9.5%	7.4%	1.2%
	3	Count	19	11	17
		% within QCL_1	4.9%	2.9%	4.4%
Total		Count	82	47	36

QCL_1*$q6 Crosstabulation

			Total
Cluster Number of Case	1	Count	374
		% within QCL_1	
	2	Count	243
		% within QCL_1	
	3	Count	384
		% within QCL_1	
Total		Count	1001

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

We can tell from the table that the favorite TV channels of trendy TV lovers (who are most likely to buy ESI's new products) are movie channels, and remote shopping maniacs' favorite TV channels are news channel. Thus we suggest to put advertisements on movie and news channels to target potential customers.

Whether get premium channels.

From table we can tell whether respondents get premium channels is significantly correlated with their intention to buy ESI's new product ($df=4$, $p<0.05$).

There are less people from old-fashioned conservatives having premium channels than the other two groups of people. Thus we suggest targeting potential customers through premium channels.

Cluster Number of Case * Q.7 Whether Get Premium Channels

Crosstab

			Q.7 Whether Get Premium Channels			Total
			yes	no	don't know	
Cluster Number of Case	1	Count	181	190	3	374
		% within Cluster Number of Case	48.4%	50.8%	0.8%	100.0%
	2	Count	105	138	0	243
		% within Cluster Number of Case	43.2%	56.8%	0.0%	100.0%
	3	Count	132	251	1	384
		% within Cluster Number of Case	34.4%	65.4%	0.3%	100.0%
Total		Count	418	579	4	1001
		% within Cluster Number of Case	41.8%	57.8%	0.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.763[a]	4	.001
Likelihood Ratio	19.529	4	.001
Linear-by-Linear Association	13.758	1	.000
N of Valid Cases	1001		

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .97.

When to Watch TV in Weekdays and at Weekends.

QCL_1*$WhenWatchTVDuringWeekdays Crosstabulation

			When watch TV during weekdays[a]							Total
			TV-Q.6A When Watch TV During Weekday	TV-Q.6A When Watch TV During Weekday	TV-Q.6A When Watch TV During Weekday	TV-Q.6A When Watch TV During Weekday	TV-Q.6A When Watch TV During Weekday	TV-Q.6A When Watch TV During Weekday	TV-Q6A When Watch TV During Weekday	
Cluster Number of Case	1	Count	189	93	145	317	430	136	50	507
		% within QCL_1	37.3%	18.3%	28.6%	62.5%	84.8%	26.8%	9.9%	
	2	Count	110	53	75	218	309	85	21	354
		% within QCL_1	31.1%	15.0%	21.2%	61.6%	87.3%	24.0%	5.9%	
	3	Count	198	99	146	425	483	121	19	596
		% within QCL_1	33.2%	16.6%	24.5%	71.3%	81.0%	20.3%	3.2%	
Total		Count	497	245	366	960	1222	342	90	1457

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

According to the multiple responses crosstabs, we can declare that on weekdays, most people in our first cluster, Trendy TV lovers, choose to watch TV in the evening (84.8%) and early evening (62.5%), while the second cluster Remote shopping maniacs keeps the same watching habit, 87.3% report they watch TV in the evening, from 8 p.m. to 11 p.m., followed by 61.6% claim that they watch in early evening from 5 p.m. to 8 p.m. We also notice that, more

Trendy TV lovers (37.3%) than other two clusters watch team in the early morning, from 6 a.m. to 9 p.m.

QCL_1*$WhenWatchTVDuringWeekends Crosstabulation

			When Watch TV During Weekends[a]							Total
			TV-Q.6A When Watch TV During Weekends	TV-Q.6A When Watch TV During Weekends	Q.	TV-Q.6A When Watch TV During Weekend	TV-Q.6A When Watch TV During Weekend	TV-Q.6A When Watch TV During Weekend	TV-Q.6A When Watch TV During Weekend	
Cluster Number of Case	1	Count	113	171	215	252	371	228	70	492
		% within QCL_1	23.0%	34.8%	43.7%	51.2%	75.4%	46.3%	14.2%	
		% of Total	8.1%	12.3%	15.4%	18.1%	26.7%	16.4%	5.0%	35.3%
	2	Count	56	97	142	178	256	112	38	336
		% within QCL_1	16.7%	28.9%	42.3%	53.0%	76.2%	33.3%	11.3%	
		% of Total	4.0%	7.0%	10.2%	12.8%	18.4%	8.0%	2.7%	24.1%
	3	Count	103	143	241	317	418	161	37	564
		% within QCL_1	18.3%	25.4%	42.7%	56.2%	74.1%	28.5%	6.6%	
		% of Total	7.4%	10.3%	17.3%	22.8%	30.0%	11.6%	2.7%	40.5%
Total		Count	272	411	598	747	1045	501	145	1392
		% of Total	19.5%	29.5%	43.0%	53.7%	75.1%	36.0%	10.4%	100.0%

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

However, on weekends, the time people spending on TV is more equal distributed in the whole day. Most of the Trendy TV Lovers watch TV in evening (75.4%), followed by early evening (51.2%), late night (46.3%), morning (34.8%) and early morning (23%). For the Remote shopping maniacs, also report the same trend, with 76.2% of them watching TV in evening and 53% watching in early evening. As the weekdays, the first cluster respondents show their preference to watch TV in the morning, while the percent of people choosing “watch TV in the early morning/morning” is higher than other two clusters.

From such result, we suggest that ESI could put most of their advertisements for their new device in the evening, from 8 to 11 p.m. and early evening, from 5 to 8 p.m. They can also invest on the early morning TV ads, targeting at the first cluster. But on weekends, they can also put some advertisements in late night, from 11 p.m. to 1 a.m. and morning, from 9 a.m. to 12 p.m.

Reaction when TV Commercials Come On

We then go through people’s reaction when TV commercials come on. It turns out that most people will leave it on, but don’t pay any attention (31.4% in Cluster 1, 33.5% in Cluster 2 and 35.5% in Cluster 3). But we also find a higher rate in the respondents in first cluster to

choose switch channels (31%) and watch the ads (27.4%). Such results indicate that people who have a strong intention to purchase ESI device are more likely to watch the Ads or switch the channel. Thus, we recommend the ESI Company invest on TV ads, but not only stick to it. They can launch other marketing campaign to promote the product, as well as put well-produced ads to catch audience's attention at the first second.

QCL_1*$ReactionWhenTVCommercials Crosstabulation

			Reaction When TV Commercials Come On[a]					Total
			TV-Q.8 Reaction When TV Commercials Come On	TV-Q.8 Reaction When TV Commercials Come On	TV-Q.8 Reaction When TV Commercials Come On	TV-Q.8 Reactions When TV Commercials Come On	TV-Q.8 Reactions When TV Commercials Come On	
Cluster Number of Case	1	Count	139	159	157	40	59	507
		% within QCL_1	27.4%	31.4%	31.0%	7.9%	11.6%	
		% of Total	9.6%	10.9%	10.8%	2.8%	4.1%	34.9%
	2	Count	97	119	86	29	51	355
		% within QCL_1	27.3%	33.5%	24.2%	8.2%	14.4%	
		% of Total	6.7%	8.2%	5.9%	2.0%	3.5%	24.4%
	3	Count	157	210	158	60	75	592
		% within QCL_1	26.5%	35.5%	26.7%	10.1%	12.7%	
		% of Total	10.8%	14.4%	10.9%	4.1%	5.2%	40.7%
Total		Count	393	488	401	129	185	1454
		% of Total	27.0%	33.6%	27.6%	8.9%	12.7%	100.0%

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

(2) Radio Listening Habits

When it comes to radio, we first run the crosstab and find more than 98% of people in all three clusters listen to radio. Though there is no significant relationship between clusters and listening to radio or not, the fact that large part of people use it as a major media channel makes it important.

Radio programs that you generally go to see

QCL_1*$q18 Crosstabulation

			Radeo program preferences[a]								Total
			Q.18 Radio Program Preferences	Q.18 Radio Program Preferences	Q.18 Radio Program Preferences	Q.18 Radio Program Preferences	Q.18 Radio Program Preferences	Q.18 Radio Program Preferences	Q.18 Radio Program Preferences	Q.18 Radio Program Preferences	
Cluster Number of Case	1	Count	1	11	407	105	46	89	56	11	467
		% within QCL_1	0.2%	2.4%	87.2%	22.5%	9.9%	19.1%	12.0%	2.4%	
	2	Count	0	7	269	101	24	72	45	5	330
		% within QCL_1	0.0%	2.1%	81.5%	30.6%	7.3%	21.8%	13.6%	1.5%	
	3	Count	1	8	434	134	41	110	63	10	528
		% within QCL_1	0.2%	1.5%	82.2%	25.4%	7.8%	20.8%	11.9%	1.9%	
Total		Count	2	26	1110	340	111	271	164	26	1325

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

We can tell from this table and the questionnaire that trendy TV lovers like to listen to music radio programs the most (87.2%), as well as remote shopping maniac. ESI could put advertisement in music radio programs so there is be a high chance trendy TV lovers and remote shopping maniac would listen to the advertisement.

QCL_1*$TypeOfRadioProgramListenTo Crosstabulation

			What type of radio program do you listen[a]						
			RAD-Q.2A Radio Programs Listened To	RAD-Q.2 Radio Programs Listened To	RAD-Q.2 Radio Programs Listened To	RAD-Q.2 Radio Programs Listened To	RAD-Q.2 Radio Programs Listened To	RAD-Q.2 Radio Programs Listened To	Total
Cluster Number of Case	1	Count	9	52	473	264	136	138	490
		% within QCL_1	1.8%	10.6%	96.5%	53.9%	27.8%	28.2%	
		% of Total	0.6%	3.7%	34.0%	19.0%	9.8%	9.9%	35.2%
	2	Count	8	36	321	208	88	114	335
		% within QCL_1	2.4%	10.7%	95.8%	62.1%	26.3%	34.0%	
		% of Total	0.6%	2.6%	23.1%	15.0%	6.3%	8.2%	24.1%
	3	Count	11	34	529	334	155	160	566
		% within QCL_1	1.9%	6.0%	93.5%	59.0%	27.4%	28.3%	
		% of Total	0.8%	2.4%	38.0%	24.0%	11.1%	11.5%	40.7%
Total		Count	28	122	1323	806	379	412	1391
		% of Total	2.0%	8.8%	95.1%	57.9%	27.2%	29.6%	100.0%

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

QCL_1*$MostOftenRadioPrograms Crosstabulation

			Radio Programs Listened to Most Often[a]						
			RAD-Q.2B Radio Programs Listened To Most Often	RAD-Q.2B Radio Programs Listened To Most Often	RAD-Q.2B Radio Programs Listened To Most Often	RAD-Q.2B Radio Programs Listened To Most Often	RAD-Q.2B Radio Programs Listened To Most Often	RAD-Q.2B Radio Programs Listened To Most Often	Total
Cluster Number of Case	1	Count	5	7	392	57	21	55	477
		% within QCL_1	1.0%	1.5%	82.2%	11.9%	4.4%	11.5%	
		% of Total	0.4%	0.5%	29.2%	4.3%	1.6%	4.1%	35.6%
	2	Count	1	3	240	59	10	43	323
		% within QCL_1	0.3%	0.9%	74.3%	18.3%	3.1%	13.3%	
		% of Total	0.1%	0.2%	17.9%	4.4%	0.7%	3.2%	24.1%
	3	Count	3	8	429	105	23	65	541
		% within QCL_1	0.6%	1.5%	79.3%	19.4%	4.3%	12.0%	
		% of Total	0.2%	0.6%	32.0%	7.8%	1.7%	4.8%	40.3%
Total		Count	9	18	1061	221	54	163	1341
		% of Total	0.7%	1.3%	79.1%	16.5%	4.0%	12.2%	100.0%

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

Most of the respondents in the three clusters report they listen to music, but the percentage in the first cluster (96.5%) is slightly higher than the other two (95.8% & 93.5%). The other three programs people say they listen are news, talk shows and sports, with 53.9%, 28.2% and 27.8% among Trendy TV Lovers. The results in the question asking what's radio program people listen to most often also illustrate such results. People also show high interest in music programs, with 82.2% of people in the Cluster 1 answering they listen to music most often, a little bit higher than people in the other two clusters (74.3%

& 79.3%). In other two programs people choose they listen to most often (News and Talk Shows), the percentages in the first cluster are lower than the second and third clusters. As previously explained, we can draw the conclusion that music is the most program on radio, followed by news, talk show and sports.

QCL_1*$TypesofMusicListenTo Crosstabulation

			Types of Music Listen								
			RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD- Type Music L To
Cluster Number of Case	1	Count	5	254	123	54	209	25	133	63	
		% within QCL_1	1.0%	51.4%	24.9%	10.9%	42.3%	5.1%	26.9%	12.8%	
		% of Total	0.4%	18.1%	8.8%	3.8%	14.9%	1.8%	9.5%	4.5%	
	2	Count	3	172	112	43	173	36	70	28	
		% within QCL_1	0.9%	50.6%	32.9%	12.6%	50.9%	10.6%	20.6%	8.2%	
		% of Total	0.2%	12.2%	8.0%	3.1%	12.3%	2.6%	5.0%	2.0%	
	3	Count	8	232	129	77	311	44	104	45	
		% within QCL_1	1.4%	40.6%	22.6%	13.5%	54.5%	7.7%	18.2%	7.9%	
		% of Total	0.6%	16.5%	9.2%	5.5%	22.1%	3.1%	7.4%	3.2%	
Total		Count	16	658	364	174	693	105	307	136	
		% of Total	1.1%	46.8%	25.9%	12.4%	49.3%	7.5%	21.9%	9.7%	

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

QCL_1*$TypesofMusicListenTo Crosstabulation

			sic Listen To[a]								
			RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	RAD-Q.3 Types of Music Listen To	Total
Cluster Number of Case	1	Count	99	29	208	259	79	121	213	43	494
		% within QCL_1	20.0%	5.9%	42.1%	52.4%	16.0%	24.5%	43.1%	8.7%	
		% of Total	7.0%	2.1%	14.8%	18.4%	5.6%	8.6%	15.2%	3.1%	35.2%
	2	Count	63	10	130	194	24	74	94	32	340
		% within QCL_1	18.5%	2.9%	38.2%	57.1%	7.1%	21.8%	27.6%	9.4%	
		% of Total	4.5%	0.7%	9.3%	13.8%	1.7%	5.3%	6.7%	2.3%	24.2%
	3	Count	101	13	203	327	21	89	137	29	571
		% within QCL_1	17.7%	2.3%	35.6%	57.3%	3.7%	15.6%	24.0%	5.1%	
		% of Total	7.2%	0.9%	14.4%	23.3%	1.5%	6.3%	9.8%	2.1%	40.6%
Total		Count	263	52	541	780	124	284	444	104	1405
		% of Total	18.7%	3.7%	38.5%	55.5%	8.8%	20.2%	31.6%	7.4%	100.0%

Percentages and totals are based on respond
a. Dichotomy group tabulated at value 1.

We then analyze the type of music people listen to on radio. There are several types of music that are popular among American customers with more than 40% of people in each cluster choosing: classic rock, folk, light/easy listening, oldies and top 40/countdown. The results show that more Trendy TV Lovers listen to classic (51.4%), light/easy listening (42.1%) and top 40/countdown (43.1%) than people in other two clusters. However, lower percentage of people in the first cluster listens to folk and oldies. We claim that our major target customers show a higher interest in classic rock, light/easy listening and top 40/countdown.

With regard to people's reaction towards the radio commercials, our team focused on responses given by the first and second clusters. It turns out that most people will leave it on, but don't pay any attention. But 38.7% of respondents from Trendy TV Lovers choose this answer, lower than 49.6% in Remote

shopping maniacs and 51.4% in old-fashioned conservatives, while 27% of them choose switch stations, much higher than 21.4% and 13.6% in the second and third clusters. In addition, a large people choose listen to the ads (31.8% in the first cluster).

QCL_1*$ReactionWhenRadioCommercials Crosstabulation

			Reaction When Radio Commercials Come On[a]					
			RAD-Q.4 Reaction When Radio Commercials Come On	RAD-Q.4 Reaction When Radio Commercials Come On	RAD-Q.4 Reaction When Radio Commercials Come On	RAD-Q.4 Reaction When Radio Commercials Come On	RAD-Q.4 Reaction When Radio Commercials Come On	Total
Cluster Number of Case	1	Count	157	191	133	5	24	493
		% within QCL_1	31.8%	38.7%	27.0%	1.0%	4.9%	
		% of Total	11.2%	13.6%	9.5%	0.4%	1.7%	35.2%
	2	Count	95	169	73	1	11	341
		% within QCL_1	27.9%	49.6%	21.4%	0.3%	3.2%	
		% of Total	6.8%	12.1%	5.2%	0.1%	0.8%	24.4%
	3	Count	199	291	77	5	11	566
		% within QCL_1	35.2%	51.4%	13.6%	0.9%	1.9%	
		% of Total	14.2%	20.8%	5.5%	0.4%	0.8%	40.4%
Total		Count	451	651	283	11	46	1400
		% of Total	32.2%	46.5%	20.2%	0.8%	3.3%	100.0%

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

From all above, we recommend ESI to invest on radio ads, since still a large part of people say they will listen to ads. They can put most of their ads in between music programs, and less in news reports, talk shows and sports. ESI can build up partnership with music stations, especially the stations focus on classic rock, easy listening and countdown music. As the TV ads, they need to promote their products with well-produced ads, to catch audience's attention before they switch.

(3) VCR ownership (non-significant)

From the table we can tell that $p=0.264$, which means $p>0.05$. Thus we conclude there is no significant relationship between VCR ownership and their intention to buy the new product.

Cluster Number of Case * Q.10a VCR Ownership

Crosstab

			Q.10a VCR Ownership		
			yes	no	Total
Cluster Number of Case	1	Count	474	39	513
		% within Cluster Number of Case	92.4%	7.6%	100.0%
	2	Count	329	28	357
		% within Cluster Number of Case	92.2%	7.8%	100.0%
	3	Count	541	61	602
		% within Cluster Number of Case	89.9%	10.1%	100.0%
Total		Count	1344	128	1472
		% within Cluster Number of Case	91.3%	8.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.665[a]	2	.264
Likelihood Ratio	2.635	2	.268
Linear-by-Linear Association	2.307	1	.129
N of Valid Cases	1472		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 31.04.

(4) Video Type Watch Habit

Whether currently rent video.

From table we can tell whether respondents currently rent videos is significantly correlated with their intention to buy ESI's new product (df=4, $p<0.05$).

There are less people from old-fashioned conservatives currently rent videos than the other two groups of people. Thus we suggest to target potential customers through video rental stores.

Cluster Number of Case * Q.12 Whether Currently Rent Videos Crosstabulation

			Q.12 Whether Currently Rent Videos			
			yes	no	don't know	Total
Cluster Number of Case	1	Count	379	93	2	474
		% within Cluster Number of Case	80.0%	19.6%	0.4%	100.0%
	2	Count	254	74	1	329
		% within Cluster Number of Case	77.2%	22.5%	0.3%	100.0%
	3	Count	388	153	0	541
		% within Cluster Number of Case	71.7%	28.3%	0.0%	100.0%
Total		Count	1021	320	3	1344
		% within Cluster Number of Case	76.0%	23.8%	0.2%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.764[a]	4	.012
Likelihood Ratio	13.763	4	.008
Linear-by-Linear Association	8.293	1	.004
N of Valid Cases	1344		

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .73.

Video rental type.

QCL_1*$q13a Crosstabulation

			rental video categories[a]						Total
			Q.13a Video Rentals - General Categories Rent	Q.13a Video Rentals - General Categories Rent	Q.13a Video Rentals - General Categories Rent	Q.13a Video Rentals - General Categories Rent	Q.13a Video Rentals - General Categories Rent	Q.13a Video Rentals - General Categories Rent	
Cluster Number of Case	1	Count	1	4	3	8	49	348	368
		% within QCL_1	0.3%	1.1%	0.8%	2.2%	13.3%	94.6%	
	2	Count	1	2	2	6	27	240	246
		% within QCL_1	0.4%	0.8%	0.8%	2.4%	11.0%	97.6%	
	3	Count	4	4	3	12	26	358	372
		% within QCL_1	1.1%	1.1%	0.8%	3.2%	7.0%	96.2%	
Total		Count	6	10	8	26	102	946	986

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

QCL_1*$q13b Crosstabulation

			types of movie rent[a]		
			Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent
Cluster Number of Case	1	Count	190	11	25
		% within QCL_1	59.7%	3.5%	7.9%
	2	Count	119	4	19
		% within QCL_1	53.8%	1.8%	8.6%
	3	Count	165	8	17
		% within QCL_1	51.7%	2.5%	5.3%
Total		Count	474	23	61

QCL_1*$q13b Crosstabulation

			types of movie rent[a]		
			Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent
Cluster Number of Case	1	Count	7	57	37
		% within QCL_1	2.2%	17.9%	11.6%
	2	Count	8	58	24
		% within QCL_1	3.6%	26.2%	10.9%
	3	Count	14	63	49
		% within QCL_1	4.4%	19.7%	15.4%
Total		Count	29	178	110

QCL_1*$q13b Crosstabulation

			types of movie rent[a]		
			Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent
Cluster Number of Case	1	Count	190	45	15
		% within QCL_1	59.7%	14.2%	4.7%
	2	Count	131	31	13
		% within QCL_1	59.3%	14.0%	5.9%
	3	Count	175	50	12
		% within QCL_1	54.9%	15.7%	3.8%
Total		Count	496	126	40

QCL_1*$q13b Crosstabulation

			types of movie rent[a]		
			Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent
Cluster Number of Case	1	Count	124	11	44
		% within QCL_1	39.0%	3.5%	13.8%
	2	Count	88	8	29
		% within QCL_1	39.8%	3.6%	13.1%
	3	Count	125	7	36
		% within QCL_1	39.2%	2.2%	11.3%
Total		Count	337	26	109

QCL_1*$q13b Crosstabulation

			Total
Cluster Number of Case	1	Count	318
		% within QCL_1	
	2	Count	221
		% within QCL_1	
	3	Count	319
		% within QCL_1	
Total		Count	858

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

QCL_1*$q13c Crosstabulation

			types of movies rent[a]								Total
			Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	Q.13b Video Rentals - Types of Movies Rent	
Cluster Number of Case	1	Count	18	55	108	11	46	46	7	22	188
		% within QCL_1	9.6%	29.3%	57.4%	5.9%	24.5%	24.5%	3.7%	11.7%	
	2	Count	14	28	79	9	31	27	5	8	120
		% within QCL_1	11.7%	23.3%	65.8%	7.5%	25.8%	22.5%	4.2%	6.7%	
	3	Count	18	43	103	12	48	38	7	24	183
		% within QCL_1	9.8%	23.5%	56.3%	6.6%	26.2%	20.8%	3.8%	13.1%	
Total		Count	50	126	290	32	125	111	19	54	491

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

From the table above we can tell that people who are likely to buy ESI's new product prefer to rent movie videos, especially action/adventure movies, comedy movies and musical movies. We suggest ESI can promote the new product by placing this product into those movies or by sponsoring movies we listed above.

(5) Movie Watch Habits

Types of movies that you usually go to see.

QCL_1*$q15a Crosstabulation

			types of movies go to see[a]		
			Q.15 Types of Movies Go to See	Q.15 Types of Movies Go to See	Q.15 Types of Movies Go to See
Cluster Number of Case	1	Count	174	4	11
		% within QCL_1	54.9%	1.3%	3.5%
	2	Count	93	3	9
		% within QCL_1	45.1%	1.5%	4.4%
	3	Count	122	1	9
		% within QCL_1	44.0%	0.4%	3.2%
Total		Count	389	8	29

QCL_1*$q15a Crosstabulation

			types of movies go to see[a]		
			Q.15 Types of Movies Go to See	Q.15 Types of Movies Go to See	Q.15 Types of Movies Go to See
Cluster Number of Case	1	Count	2	37	7
		% within QCL_1	0.6%	11.7%	2.2%
	2	Count	5	28	6
		% within QCL_1	2.4%	13.6%	2.9%
	3	Count	3	37	8
		% within QCL_1	1.1%	13.4%	2.9%
Total		Count	10	102	21

QCL_1*$q15a Crosstabulation

			types of movies go to see[a]		
			Q.15 Types of Movies Go to See	Q.15 Types of Movies Go to See	Q.15 Types of Movies Go to See
Cluster Number of Case	1	Count	165	25	7
		% within QCL_1	52.1%	7.9%	2.2%
	2	Count	114	19	5
		% within QCL_1	55.3%	9.2%	2.4%
	3	Count	143	26	9
		% within QCL_1	51.6%	9.4%	3.2%
Total		Count	422	70	21

QCL_1*$q15a Crosstabulation

			types of movies go to see[a]		
			Q.15 Types of Movies Go to See	Q.15 Types of Movies Go to See	Q.15 Types of Movies Go to See
Cluster Number of Case	1	Count	108	3	43
		% within QCL_1	34.1%	0.9%	13.6%
	2	Count	75	5	16
		% within QCL_1	36.4%	2.4%	7.8%
	3	Count	82	7	11
		% within QCL_1	29.6%	2.5%	4.0%
Total		Count	265	15	70

QCL_1*$q15a Crosstabulation

			Total
Cluster Number of Case	1	Count	317
		% within QCL_1	
	2	Count	206
		% within QCL_1	
	3	Count	277
		% within QCL_1	
Total		Count	800

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

QCL_1*$q15b Crosstabulation

			types of movies go to see[a]								Total
			Q.15 Types of Movies Go to See	Q.15 Types of Movies Go To See	Q.15 Types of Movies Go To See	Q.15 Types of Movies Go To See	Q.15 Types of Movies Go To See	Q.15 Types of Movies Go To See	Q.15 Types of Movies Go To See	Q.15 Types of Movies Go To See	
Cluster Number of Case	1	Count	6	23	77	0	35	37	1	12	149
		% within QCL_1	4.0%	15.4%	51.7%	0.0%	23.5%	24.8%	0.7%	8.1%	
	2	Count	6	12	40	4	24	15	4	9	85
		% within QCL_1	7.1%	14.1%	47.1%	4.7%	28.2%	17.6%	4.7%	10.6%	
	3	Count	2	19	56	1	21	26	3	14	115
		% within QCL_1	1.7%	16.5%	48.7%	0.9%	18.3%	22.6%	2.6%	12.2%	
Total		Count	14	54	173	5	80	78	8	35	349

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

From the tables above we can see that people who are most likely to buy ESI's new product prefer to go to see action/adventure and comedy movies. Thus we suggest ESI to sponsor action/adventure or comedy movies, or to promote product in theatres when these kinds of movies are showing.

Whether Go Out To the Movies.

From the crosstab results, $\lambda = 36.1, df = 2, p < .05$, we can tell that there is a statistically significant difference between whether people go out for movie and their intention of using ESI's new product. As we can see from the table, more trendy TV lovers like to go out for movie than other two clusters.

Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Cluster Number of Case * MOV-Q.1 Whether Go Out To the Movies	1472	68.9%	664	31.1%	2136	100.0%

Cluster Number of Case * MOV-Q.1 Whether Go Out To the Movies Crosstabulation

			MOV-Q.1 Whether Go Out To the Movies		
			yes	no	Total
Cluster Number of Case	1	Count	421	92	513
		% within Cluster Number of Case	82.1%	17.9%	100.0%
	2	Count	292	65	357
		% within Cluster Number of Case	81.8%	18.2%	100.0%
	3	Count	412	190	602
		% within Cluster Number of Case	68.4%	31.6%	100.0%
Total		Count	1125	347	1472
		% within Cluster Number of Case	76.4%	23.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.084[a]	2	.000
Likelihood Ratio	35.611	2	.000
Linear-by-Linear Association	29.653	1	.000
N of Valid Cases	1472		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 84.16.

(6) Equipment household currently have

We can tell from this table and the questionnaire that 93% of trendy TV lovers households have tape player, as well as 92.6% of the remote shopping maniacs. ESI could put advertisement in tape player stores so there is be a high chance trendy TV lovers and remote shopping maniac would see the advertisement.

QCL_1*$q19 Crosstabulation

			equipment owned[a]		
			Q.19a Equipment Owned: Satellite Dish	Q.19b Equipment Owned: CD Player	Q.19c Equipment Owned: Video Disc Player
Cluster Number of Case	1	Count	38	326	57
		% within QCL_1	7.6%	65.6%	11.5%
	2	Count	18	231	25
		% within QCL_1	5.1%	65.8%	7.1%
	3	Count	34	283	53
		% within QCL_1	6.0%	49.9%	9.3%
Total		Count	90	840	135

QCL_1*$q19 Crosstabulation

			equipment owned[a]		
			Q.19d Equipment Owned: Video Game Unit	Q.19e Equipment Owned: Video Camera/Camcorder	Q.19f Equipment Owned: Digital Address Book
Cluster Number of Case	1	Count	234	149	47
		% within QCL_1	47.1%	30.0%	9.5%
	2	Count	154	122	26
		% within QCL_1	43.9%	34.8%	7.4%
	3	Count	214	136	35
		% within QCL_1	37.7%	24.0%	6.2%
Total		Count	602	407	108

QCL_1*$q19 Crosstabulation

			equipment owned[a]		
			Q.19g Equipment Owned: Electronic Personal Organizer	Q.19h Equipment Owned: Stereo System	Q.19i Equipment Owned: Tape Player
Cluster Number of Case	1	Count	61	448	463
		% within QCL_1	12.3%	90.1%	93.2%
	2	Count	31	310	325
		% within QCL_1	8.8%	88.3%	92.6%
	3	Count	43	462	525
		% within QCL_1	7.6%	81.5%	92.6%
Total		Count	135	1220	1313

QCL_1*$q19 Crosstabulation

			Total
Cluster Number of Case	1	Count	497
		% within QCL_1	
	2	Count	351
		% within QCL_1	
	3	Count	567
		% within QCL_1	
Total		Count	1415

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

(7) Whether use cellular phone personally (non-significant)

Cluster Number of Case * Q.22 Whether Use Cellular Phone Personally Crosstabulation

			Q.22 Whether Use Cellular Phone Personally			
			yes	no	don't know	Total
Cluster Number of Case	1	Count	94	23	0	117
		% within Cluster Number of Case	80.3%	19.7%	0.0%	100.0%
	2	Count	77	18	0	95
		% within Cluster Number of Case	81.1%	18.9%	0.0%	100.0%
	3	Count	68	27	1	96
		% within Cluster Number of Case	70.8%	28.1%	1.0%	100.0%
Total		Count	239	68	1	308
		% within Cluster Number of Case	77.6%	22.1%	0.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.356[a]	4	.253
Likelihood Ratio	5.398	4	.249
Linear-by-Linear Association	3.002	1	.083
N of Valid Cases	308		

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .31.

We can see from the table above that p=0.253 meaning there is no statistically significant relationship between whether respondents use cellular phone and their intention to use ESI's new product.

(8) Sports Participate Habits

In the sports part, the most popular sports reported by respondents in the cluster of Trendy TV Lovers are walking (48.00%), working out (28.3%), swimming (25.9%) and basketball (17.4%). More specifically, Trendy TV Lovers present higher participation in working out, swimming and basketball than other two clusters. They also participate more in Aerobics/dance exercise (17%), jogging/running (16.6%) and football (16.4%).

			SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis
Cluster Number of Case	1	Count	84	65	86	82	55	81	48	69
		% within QCL_1	17.0%	13.2%	17.4%	16.6%	11.1%	16.4%	9.7%	14.0%
		% of Total	5.9%	4.6%	6.1%	5.8%	3.9%	5.7%	3.4%	4.9%
	2	Count	47	36	21	70	46	47	19	53
		% within QCL_1	13.4%	10.3%	6.0%	20.0%	13.1%	13.4%	5.4%	15.1%
		% of Total	3.3%	2.5%	1.5%	4.9%	3.2%	3.3%	1.3%	3.7%
	3	Count	52	70	53	92	63	68	43	99
		% within QCL_1	9.1%	12.2%	9.3%	16.1%	11.0%	11.9%	7.5%	17.3%
		% of Total	3.7%	4.9%	3.7%	6.5%	4.4%	4.8%	3.0%	7.0%
Total		Count	183	171	160	244	164	196	110	221
		% of Total	12.9%	12.1%	11.3%	17.2%	11.6%	13.8%	7.8%	15.6%

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

			Sports Particapate in on a Regular Basis[a]							
			SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis
Cluster Number of Case	1	Count	15	58	13	27	82	24	32	7
		% within QCL_1	3.0%	11.7%	2.6%	5.5%	16.6%	4.9%	6.5%	1.4%
		% of Total	1.1%	4.1%	0.9%	1.9%	5.8%	1.7%	2.3%	0.5%
	2	Count	5	58	8	24	42	16	17	2
		% within QCL_1	1.4%	16.6%	2.3%	6.9%	12.0%	4.6%	4.9%	0.6%
		% of Total	0.4%	4.1%	0.6%	1.7%	3.0%	1.1%	1.2%	0.1%
	3	Count	8	60	10	19	47	24	17	2
		% within QCL_1	1.4%	10.5%	1.7%	3.3%	8.2%	4.2%	3.0%	0.3%
		% of Total	0.6%	4.2%	0.7%	1.3%	3.3%	1.7%	1.2%	0.1%
Total		Count	28	176	31	70	171	64	66	11
		% of Total	2.0%	12.4%	2.2%	4.9%	12.1%	4.5%	4.7%	0.8%

Percentages and totals are based on respond

a. Dichotomy group tabulated at value 1.

			SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis
Cluster Number of Case	1	Count	7	18	46	128	12	51	237	140
		% within QCL_1	1.4%	3.6%	9.3%	25.9%	2.4%	10.3%	48.0%	28.3%
		% of Total	0.5%	1.3%	3.2%	9.0%	0.8%	3.6%	16.7%	9.9%
	2	Count	2	7	43	90	2	29	183	95
		% within QCL_1	0.6%	2.0%	12.3%	25.7%	0.6%	8.3%	52.3%	27.1%
		% of Total	0.1%	0.5%	3.0%	6.4%	0.1%	2.0%	12.9%	6.7%
	3	Count	2	17	47	116	5	30	261	107
		% within QCL_1	0.3%	3.0%	8.2%	20.3%	0.9%	5.2%	45.6%	18.7%
		% of Total	0.1%	1.2%	3.3%	8.2%	0.4%	2.1%	18.4%	7.6%
Total		Count	11	42	136	334	19	110	681	342
		% of Total	0.8%	3.0%	9.6%	23.6%	1.3%	7.8%	48.1%	24.2%

Percentages and totals are based on respond

a. Dichotomy group tabulated at value 1.

			SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	SPT-Q.1 Sports Participate in on a Regular Basis	Total
Cluster Number of Case	1	Count	46	128	12	51	237	140	43	64	494
		% within QCL_1	9.3%	25.9%	2.4%	10.3%	48.0%	28.3%	8.7%	13.0%	
		% of Total	3.2%	9.0%	0.8%	3.6%	16.7%	9.9%	3.0%	4.5%	34.9%
	2	Count	43	90	2	29	183	95	43	45	350
		% within QCL_1	12.3%	25.7%	0.6%	8.3%	52.3%	27.1%	12.3%	12.9%	
		% of Total	3.0%	6.4%	0.1%	2.0%	12.9%	6.7%	3.0%	3.2%	24.7%
	3	Count	47	116	5	30	261	107	55	111	572
		% within QCL_1	8.2%	20.3%	0.9%	5.2%	45.6%	18.7%	9.6%	19.4%	
		% of Total	3.3%	8.2%	0.4%	2.1%	18.4%	7.6%	3.9%	7.8%	40.4%
Total		Count	136	334	19	110	681	342	141	220	1416
		% of Total	9.6%	23.6%	1.3%	7.8%	48.1%	24.2%	10.0%	15.5%	100.0%

Percentages and totals are based on respond

a. Dichotomy group tabulated at value 1.

In the question sets of sports participation, we check the results of two popular sports among Trendy TV Lovers: Basketball and Football. According to the results, 46.3% of the trendy TV Lovers announce that they watch basketball on TV, which is much higher than other participate ways. The results in the participation of football suggest the same situation, 68.2% of people watch the game on TV. From above, we can estimate that watching sports games on TV is the most popular participation among our target audience.

QCL_1*$ParticipationInBasketball Crosstabulation

			Participation in basketball[a]						
			SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	Total
Cluster Number of Case	1	Count	217	50	101	132	91	211	469
		% within QCL_1	46.3%	10.7%	21.5%	28.1%	19.4%	45.0%	
		% of Total	16.4%	3.8%	7.6%	10.0%	6.9%	15.9%	35.4%
	2	Count	119	39	67	62	51	168	321
		% within QCL_1	37.1%	12.1%	20.9%	19.3%	15.9%	52.3%	
		% of Total	9.0%	2.9%	5.1%	4.7%	3.8%	12.7%	24.2%
	3	Count	228	59	98	128	87	267	536
		% within QCL_1	42.5%	11.0%	18.3%	23.9%	16.2%	49.8%	
		% of Total	17.2%	4.4%	7.4%	9.7%	6.6%	20.1%	40.4%
Total		Count	564	148	266	322	229	646	1326
		% of Total	42.5%	11.2%	20.1%	24.3%	17.3%	48.7%	100.0%

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

QCL_1*$ParticipationInBasketball Crosstabulation

			Participation in basketball[a]						
			SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	SPT-Q.2 Participation in Basketball	Total
Cluster Number of Case	1	Count	217	50	101	132	91	211	469
		% within QCL_1	46.3%	10.7%	21.5%	28.1%	19.4%	45.0%	
		% of Total	16.4%	3.8%	7.6%	10.0%	6.9%	15.9%	35.4%
	2	Count	119	39	67	62	51	168	321
		% within QCL_1	37.1%	12.1%	20.9%	19.3%	15.9%	52.3%	
		% of Total	9.0%	2.9%	5.1%	4.7%	3.8%	12.7%	24.2%
	3	Count	228	59	98	128	87	267	536
		% within QCL_1	42.5%	11.0%	18.3%	23.9%	16.2%	49.8%	
		% of Total	17.2%	4.4%	7.4%	9.7%	6.6%	20.1%	40.4%
Total		Count	564	148	266	322	229	646	1326
		% of Total	42.5%	11.2%	20.1%	24.3%	17.3%	48.7%	100.0%

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

Thus, we recommend ESI to put more ads in between sports games, especially those popular ones as basketball and football. It might be a huge investment, but it will be worthwhile. Also, ESI can collaborate with the brands in walking, swimming, basketball, football, dance exercise and jogging, to promote their device. Also, they can add related clothes to their lists for shopping.

(9) PC using Habits

Frequency of using PC.

Oneway

Descriptives

Cluster Number of Case

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
every day	435	2.00	.842	.040	1.92	2.07	1	3
most days	139	2.08	.826	.070	1.94	2.22	1	3
occasionally	187	1.98	.849	.062	1.86	2.10	1	3
rarely	106	1.92	.880	.086	1.75	2.09	1	3
never	114	2.11	.919	.086	1.94	2.28	1	3
Total	981	2.01	.855	.027	1.96	2.06	1	3

ANOVA

Cluster Number of Case

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.950	4	.737	1.009	.401
Within Groups	712.949	976	.730		
Total	715.898	980			

As we can see from the table, the p= .401, which is larger than .05, so that there is no statistical important relationship between the frequency of using PC and people's intention to buy ESI's new product.

Frequency of using PC at home.

As we can see that p=.673, larger than .05, thus there is no statistically significant relationship between the frequency of using PC at home and people's intention of buying ESI's new product.

Oneway

Descriptives

Cluster Number of Case

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
every day	161	2.01	.818	.064	1.88	2.13	1	3
most days	122	2.02	.792	.072	1.87	2.16	1	3
occasionally	150	1.95	.789	.064	1.83	2.08	1	3
rarely	44	2.11	.841	.127	1.86	2.37	1	3
never	37	2.14	.887	.146	1.84	2.43	1	3
Total	514	2.01	.809	.036	1.94	2.08	1	3

ANOVA

Cluster Number of Case

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.539	4	.385	.586	.673
Within Groups	334.390	509	.657		
Total	335.930	513			

Likelihood of household members buying a PC within next year.

Oneway

Descriptives

Cluster Number of Case

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
not at all likely	469	2.21	.891	.041	2.13	2.29	1	3
not very likely	186	2.08	.879	.064	1.95	2.20	1	3
somewhat likely	161	1.93	.898	.071	1.79	2.07	1	3
very likely	91	1.86	.864	.091	1.68	2.04	1	3
extremely likely	51	1.92	.935	.131	1.66	2.18	1	3
Total	958	2.09	.898	.029	2.03	2.14	1	3

ANOVA

Cluster Number of Case

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.406	4	4.351	5.497	.000
Within Groups	754.403	953	.792		
Total	771.809	957			

CROSSTABS

Univariate Analysis of Variance

Between-Subjects Factors

		N
Cluster Number of Case	1	348
	2	179
	3	431

Descriptive Statistics

Dependent Variable: Q.42 Likelilood of Household Membe

Cluster Number of Case	Mean	Std. Deviation	N
1	2.22	1.293	348
2	2.11	1.202	179
3	1.84	1.166	431
Total	2.03	1.232	958

Tests of Between-Subjects Effects

Dependent Variable: Q.42 Likelilood of Household Member Buying a PC Within Next Year

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	30.107[a]	2	15.054	10.109	.000	.021
Intercept	3528.889	1	3528.889	2369.745	.000	.713
QCL_1	30.107	2	15.054	10.109	.000	.021
Error	1422.132	955	1.489			
Total	5393.000	958				
Corrected Total	1452.239	957				

a. R Squared = .021 (Adjusted R Squared = .019)

Post Hoc Tests

Cluster Number of Case

Multiple Comparisons

Dependent Variable: Q.42 Likelilood of Household Member Buying a PC Within Next Year

Tukey HSD

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	.12	.112	.545	-.15	.38
	3	.39*	.088	.000	.18	.59
2	1	-.12	.112	.545	-.38	.15
	3	.27*	.109	.036	.01	.52
3	1	-.39*	.088	.000	-.59	-.18
	2	-.27*	.109	.036	-.52	-.01

Based on observed means.
The error term is Mean Square(Error) = 1.489.

*. The mean difference is significant at the

Homogeneous Subsets

Q.42 Likelilood of Household Member Buying a PC Within Next Year

Tukey HSD[a,b,c]

Cluster Number of Case	N	Subset 1	Subset 2
3	431	1.84	
2	179		2.11
1	348		2.22
Sig.		1.000	.489

Means for groups in homogeneous subsets are displayed.
Based on observed means.

A one-way ANOVA was calculated using cluster category and likelihood of household members buying a PC within next year. A significant difference was noted:$F = 5.497, P < .05$. In a follow-up to this question, a Tukey HSD post hoc was conducted. The Tukey HSD post hoc

indicated that there was a significant difference between people in cluster 1 ($M = 2.22, SD = 1.3$) and people in cluster 3 ($M = 1.84, SD = 1.2$). And also there was a significant difference between people in cluster 2 ($M = 2.11, SD = 1.2$) and people in cluster 3($M = 1.84, SD = 1.2$). That we can conclude trendy TV lovers and remote shopping maniac are slight more likely to buy a PC within next year than old-fashioned conservatives.

PC comfort level.

Oneway

Descriptives

Cluster Number of Case

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
not at all comfortable	285	2.25	.876	.052	2.15	2.35	1	3
not very comfortable	147	2.14	.896	.074	1.99	2.28	1	3
somewhat comfortable	347	2.05	.857	.046	1.96	2.15	1	3
very comfortable	400	1.94	.849	.042	1.86	2.03	1	3
extremely comfortable	293	2.00	.858	.050	1.90	2.10	1	3
Total	1472	2.06	.869	.023	2.02	2.10	1	3

ANOVA

Cluster Number of Case

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.896	4	4.474	6.012	.000
Within Groups	1091.723	1467	.744		
Total	1109.619	1471			

Descriptive Statistics

Dependent Variable: Q.42 PC Comfort Level

Cluster Number of Case	Mean	Std. Deviation	N
1	3.30	1.337	513
2	3.40	1.287	357
3	2.95	1.442	602
Total	3.18	1.382	1472

Tests of Between-Subjects Effects

Dependent Variable: Q.42 PC Comfort Level

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	56.159[a]	2	28.080	14.980	.000	.020
Intercept	14535.218	1	14535.218	7754.066	.000	.841
QCL_1	56.159	2	28.080	14.980	.000	.020
Error	2753.683	1469	1.875			
Total	17721.000	1472				
Corrected Total	2809.842	1471				

a. R Squared = .020 (Adjusted R Squared = .019)

Post Hoc Tests

Cluster Number of Case

Multiple Comparisons

Dependent Variable: Q.42 PC Comfort Level

Tukey HSD

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.09	.094	.582	-.32	.13
	3	.35*	.082	.000	.16	.55
2	1	.09	.094	.582	-.13	.32
	3	.45*	.091	.000	.23	.66
3	1	-.35*	.082	.000	-.55	-.16
	2	-.45*	.091	.000	-.66	-.23

Based on observed means.
The error term is Mean Square(Error) = 1.875.

*. The mean difference is significant at the

A one-way ANOVA was calculated using cluster category and people's PC comfortable level. A significant difference was noted:$F = 14{,}98, P < .05$. In a follow-up to this question, a Tukey HSD post hoc was conducted. The Tukey HSD post hoc indicated that there was a significant difference between people in cluster 1 ($M = 3.3, SD = 1.3$) and people in cluster 3 ($M = 2.95, SD = 1.4$). And also there was a significant difference between people in cluster 2 ($M = 3.4, SD = 1.3$) and people in cluster 3($M = 2.95, SD = 1.4$).

Feelings About Invasion of Privacy Concerning Computers and Technology.

Descriptive Statistics

Dependent Variable: Q.45 Feelings About Invasion of Priva

Cluster Number of Case	Mean	Std. Deviation	N
1	2.49	1.196	513
2	2.47	1.120	357
3	2.50	1.197	602
Total	2.49	1.178	1472

Tests of Between-Subjects Effects

Dependent Variable: Q.45 Feelings About Invasion of Privacy Concerning Computers and Technology

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.233[a]	2	.117	.084	.919	.000
Intercept	8673.047	1	8673.047	6246.759	.000	.810
QCL_1	.233	2	.117	.084	.919	.000
Error	2039.571	1469	1.388			
Total	11155.000	1472				
Corrected Total	2039.804	1471				

a. R Squared = .000 (Adjusted R Squared = -.001)

As you can see that $F = .084, p > .05$, thus there is no statistically significant relationship between the people's feeling about invasion of privacy concerning computers and technology and people's intention of buying ESI's new product.

(10) Preference of game and other activities

QCL_1*$q54 Crosstabulation

			things you usually do[a]		
			Q.54a Play Cards on Regular Basis	Q.54b Play Board Games on Regular Basis	Q.54c Play Crosswords or Similar Games on Regular Basis
Cluster Number of Case	1	Count	188	206	202
		% within QCL_1	38.6%	42.3%	41.5%
	2	Count	122	136	140
		% within QCL_1	36.1%	40.2%	41.4%
	3	Count	198	185	245
		% within QCL_1	37.0%	34.6%	45.8%
Total		Count	508	527	587

QCL_1*$q54 Crosstabulation

			things you usually do[a]		
			Q.54d Collect Stamps or Sports Cards on Regular Basis	Q.54e Play Bingo/Pokeno on Regular Basis	Q.54f Watch Game Shows on TV on Regular Basis
Cluster Number of Case	1	Count	80	61	260
		% within QCL_1	16.4%	12.5%	53.4%
	2	Count	60	28	142
		% within QCL_1	17.8%	8.3%	42.0%
	3	Count	92	65	264
		% within QCL_1	17.2%	12.1%	49.3%
Total		Count	232	154	666

QCL_1*$q54 Crosstabulation

			things you usually do[a]		
			Q.54g Play Keno/Pool on Regular Basis	Q.54h Play Video Games on Regular Basis	Q.54i Participate in Sweepstakes on Regular Basis
Cluster Number of Case	1	Count	138	230	201
		% within QCL_1	28.3%	47.2%	41.3%
	2	Count	72	104	114
		% within QCL_1	21.3%	30.8%	33.7%
	3	Count	107	137	185
		% within QCL_1	20.0%	25.6%	34.6%
Total		Count	317	471	500

From the crosstab results we can see that watching game on TV are the most popular choices among all three groups. There are 260 (53.4%) of the trendy TV lovers and 142(42%) of

the remote shopping maniacs, and 264(49.3%) of old-fashioned conservative like to watch game show on TV. The second popular choice for trendy TV lovers is playing video games.

(11) Whether interested in Science and Math

Crosstab

			Q.57 Whether Interested in Science and Math			
			yes	no	don't know	Total
Cluster Number of Case	1	Count	361	147	5	513
		% within Cluster Number of Case	70.4%	28.7%	1.0%	100.0%
	2	Count	267	86	4	357
		% within Cluster Number of Case	74.8%	24.1%	1.1%	100.0%
	3	Count	359	234	9	602
		% within Cluster Number of Case	59.6%	38.9%	1.5%	100.0%
Total		Count	987	467	18	1472
		% within Cluster Number of Case	67.1%	31.7%	1.2%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.396[a]	4	.000
Likelihood Ratio	27.453	4	.000
Linear-by-Linear Association	15.064	1	.000
N of Valid Cases	1472		

a. 1 cells (11.1%) have expected count less than 5. The minimum expected count is 4.37.

As we can see from the crosstab, $\lambda = 27.4, df = 4, p < .05$, thus there is a statistically significant difference between people in different cluster and their interest in science and math. More remote shopping maniacs are interested in science and math than trendy TV lovers and old-fashioned conservative.

(12) Whether interested in Music and Art

Crosstab

			Q.58 Whether Interested in Music and Art			
			yes	no	don't know	Total
Cluster Number of Case	1	Count	411	102	0	513
		% within Cluster Number of Case	80.1%	19.9%	0.0%	100.0%
	2	Count	293	60	4	357
		% within Cluster Number of Case	82.1%	16.8%	1.1%	100.0%
	3	Count	430	163	9	602
		% within Cluster Number of Case	71.4%	27.1%	1.5%	100.0%
Total		Count	1134	325	13	1472
		% within Cluster Number of Case	77.0%	22.1%	0.9%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.999[a]	4	.000
Likelihood Ratio	28.081	4	.000
Linear-by-Linear Association	15.088	1	.000
N of Valid Cases	1472		

a. 2 cells (22.2%) have expected count less than 5. The minimum expected count is 3.15.

As we can see from the crosstab, $\lambda = 24, df = 4, p < .05$, thus there is a statistically significant difference between people in different cluster and their interest in music and art. More remote shopping maniacs are interested in music and art than those who are trendy TV lovers and old-fashioned conservative.

(13) Newspaper and magazine reading habits

How much enjoy keeping up with news.

Descriptive Statistics

Dependent Variable: Q.59 How Much Enjoy Keeping up Wi

Cluster Number of Case	Mean	Std. Deviation	N
1	1.46	.687	513
2	1.48	.669	357
3	1.55	.753	602
Total	1.50	.711	1472

Tests of Between-Subjects Effects

Dependent Variable: Q.59 How Much Enjoy Keeping up With the News

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2.416[a]	2	1.208	2.393	.092	.003
Intercept	3141.609	1	3141.609	6223.201	.000	.809
QCL_1	2.416	2	1.208	2.393	.092	.003
Error	741.584	1469	.505			
Total	4059.000	1472				
Corrected Total	743.999	1471				

a. R Squared = .003 (Adjusted R Squared = .002)

As we can see that $F(2) = 2.4, p > .05$, thus there is no statistically significant relationship between the people's being enjoy keeping up with news and technology and people's intention of buying ESI's new product.

Whether read newspaper.

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Cluster Number of Case * NWS-Q.1 If Read Newspapers	1472	68.9%	664	31.1%	2136	100.0%

Cluster Number of Case * NWS-Q.1 If Read Newspapers Crosstabulation

			NWS-Q.1 If Read Newspapers		
			yes	no	Total
Cluster Number of Case	1	Count	436	77	513
		% within Cluster Number of Case	85.0%	15.0%	100.0%
	2	Count	310	47	357
		% within Cluster Number of Case	86.8%	13.2%	100.0%
	3	Count	517	85	602
		% within Cluster Number of Case	85.9%	14.1%	100.0%
Total		Count	1263	209	1472
		% within Cluster Number of Case	85.8%	14.2%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.593[a]	2	.743
Likelihood Ratio	.595	2	.743
Linear-by-Linear Association	.159	1	.690
N of Valid Cases	1472		

a. 0 cells (0.0%) have expected count less than 5. The

The crosstab table show that $\lambda = .593, p > .05$, thus there is no statistically significant difference between whether people are reading newspaper and their intention of buying ESI's new products. Because of this, there is no point to further study which section of newspaper people are reading most.

Whether read magazine.

Crosstabs

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Cluster Number of Case * MAG-Q.1 Whether Read Magazines	1472	68.9%	664	31.1%	2136	100.0%

Cluster Number of Case * MAG-Q.1 Whether Read Magazines Crosstabulation

			MAG-Q.1 Whether Read Magazines		
			yes	no	Total
Cluster Number of Case	1	Count	445	68	513
		% within Cluster Number of Case	86.7%	13.3%	100.0%
	2	Count	332	25	357
		% within Cluster Number of Case	93.0%	7.0%	100.0%
	3	Count	485	117	602
		% within Cluster Number of Case	80.6%	19.4%	100.0%
Total		Count	1262	210	1472
		% within Cluster Number of Case	85.7%	14.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.978[a]	2	.000
Likelihood Ratio	30.887	2	.000
Linear-by-Linear Association	9.704	1	.002
N of Valid Cases	1472		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 50.93.

The results from the crosstab, $\lambda = 28.98, df = 2, p < .05$, shows that there is a statistically significant difference between whether people are reading magazine and their intention of using ESI's new product. And we can see in detail that there more people who are reading a magazine in remotely shopping maniacs (332,93.0%), than trendy TV lovers(445, 86.7%) and old-fashioned conservative(485, 80.6%). Obviously magazine becomes powerful tool when marketing and promoting ESI's new product. Thus, we further our study by pinpointing the types of magazine they read.

Types of magazine read on a regular basis.

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	4	10	66
		% within QCL_1	0.9%	2.3%	15.1%
	2	Count	4	5	37
		% within QCL_1	1.2%	1.6%	11.5%
	3	Count	0	5	54
		% within QCL_1	0.0%	1.1%	11.5%
Total		Count	8	20	157

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	20	39	5
		% within QCL_1	4.6%	8.9%	1.1%
	2	Count	13	26	2
		% within QCL_1	4.0%	8.1%	0.6%
	3	Count	10	22	2
		% within QCL_1	2.1%	4.7%	0.4%
Total		Count	43	87	9

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	26	25	6
		% within QCL_1	5.9%	5.7%	1.4%
	2	Count	16	16	6
		% within QCL_1	5.0%	5.0%	1.9%
	3	Count	24	21	1
		% within QCL_1	5.1%	4.5%	0.2%
Total		Count	66	62	13

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	7	33	25
		% within QCL_1	1.6%	7.6%	5.7%
	2	Count	1	22	4
		% within QCL_1	0.3%	6.8%	1.2%
	3	Count	1	26	7
		% within QCL_1	0.2%	5.5%	1.5%
Total		Count	9	81	36

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	63	18	6
		% within QCL_1	14.4%	4.1%	1.4%
	2	Count	31	6	5
		% within QCL_1	9.6%	1.9%	1.6%
	3	Count	51	17	2
		% within QCL_1	10.8%	3.6%	0.4%
Total		Count	145	41	13

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	19	43	24
		% within QCL_1	4.3%	9.8%	5.5%
	2	Count	1	24	29
		% within QCL_1	0.3%	7.5%	9.0%
	3	Count	7	37	48
		% within QCL_1	1.5%	7.9%	10.2%
Total		Count	27	104	101

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	26	19	3
		% within QCL_1	5.9%	4.3%	0.7%
	2	Count	22	8	1
		% within QCL_1	6.8%	2.5%	0.3%
	3	Count	13	18	0
		% within QCL_1	2.8%	3.8%	0.0%
Total		Count	61	45	4

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	65	14	44
		% within QCL_1	14.9%	3.2%	10.1%
	2	Count	48	11	28
		% within QCL_1	14.9%	3.4%	8.7%
	3	Count	85	14	67
		% within QCL_1	18.0%	3.0%	14.2%
Total		Count	198	39	139

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	8	21	21
		% within QCL_1	1.8%	4.8%	4.8%
	2	Count	10	13	19
		% within QCL_1	3.1%	4.0%	5.9%
	3	Count	7	13	9
		% within QCL_1	1.5%	2.8%	1.9%
Total		Count	25	47	49

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	12	13	11
		% within QCL_1	2.7%	3.0%	2.5%
	2	Count	8	6	7
		% within QCL_1	2.5%	1.9%	2.2%
	3	Count	15	9	8
		% within QCL_1	3.2%	1.9%	1.7%
Total		Count	35	28	26

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	12	32	20
		% within QCL_1	2.7%	7.3%	4.6%
	2	Count	3	13	15
		% within QCL_1	0.9%	4.0%	4.7%
	3	Count	4	16	25
		% within QCL_1	0.8%	3.4%	5.3%
Total		Count	19	61	60

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	69	12	3
		% within QCL_1	15.8%	2.7%	0.7%
	2	Count	48	10	2
		% within QCL_1	14.9%	3.1%	0.6%
	3	Count	76	11	0
		% within QCL_1	16.1%	2.3%	0.0%
Total		Count	193	33	5

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	9	8	10
		% within QCL_1	2.1%	1.8%	2.3%
	2	Count	4	9	6
		% within QCL_1	1.2%	2.8%	1.9%
	3	Count	9	5	5
		% within QCL_1	1.9%	1.1%	1.1%
Total		Count	22	22	21

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	43	50	27
		% within QCL_1	9.8%	11.4%	6.2%
	2	Count	32	18	3
		% within QCL_1	9.9%	5.6%	0.9%
	3	Count	44	22	11
		% within QCL_1	9.3%	4.7%	2.3%
Total		Count	119	90	41

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	9	24	10
		% within QCL_1	2.1%	5.5%	2.3%
	2	Count	7	11	4
		% within QCL_1	2.2%	3.4%	1.2%
	3	Count	2	9	4
		% within QCL_1	0.4%	1.9%	0.8%
Total		Count	18	44	18

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	15	6	7
		% within QCL_1	3.4%	1.4%	1.6%
	2	Count	8	1	9
		% within QCL_1	2.5%	0.3%	2.8%
	3	Count	10	2	6
		% within QCL_1	2.1%	0.4%	1.3%
Total		Count	33	9	22

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	83	5	14
		% within QCL_1	19.0%	1.1%	3.2%
	2	Count	56	5	12
		% within QCL_1	17.4%	1.6%	3.7%
	3	Count	82	1	7
		% within QCL_1	17.4%	0.2%	1.5%
Total		Count	221	11	33

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	19	7	30
		% within QCL_1	4.3%	1.6%	6.9%
	2	Count	14	2	12
		% within QCL_1	4.3%	0.6%	3.7%
	3	Count	16	2	13
		% within QCL_1	3.4%	0.4%	2.8%
Total		Count	49	11	55

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	16	23	66
		% within QCL_1	3.7%	5.3%	15.1%
	2	Count	15	19	34
		% within QCL_1	4.7%	5.9%	10.6%
	3	Count	21	32	57
		% within QCL_1	4.5%	6.8%	12.1%
Total		Count	52	74	157

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	14	4	35
		% within QCL_1	3.2%	0.9%	8.0%
	2	Count	2	4	32
		% within QCL_1	0.6%	1.2%	9.9%
	3	Count	3	3	44
		% within QCL_1	0.6%	0.6%	9.3%
Total		Count	19	11	111

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	12	78	33
		% within QCL_1	2.7%	17.8%	7.6%
	2	Count	11	45	22
		% within QCL_1	3.4%	14.0%	6.8%
	3	Count	19	63	34
		% within QCL_1	4.0%	13.4%	7.2%
Total		Count	42	186	89

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	108	40	17
		% within QCL_1	24.7%	9.2%	3.9%
	2	Count	81	23	16
		% within QCL_1	25.2%	7.1%	5.0%
	3	Count	163	23	15
		% within QCL_1	34.6%	4.9%	3.2%
Total		Count	352	86	48

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	29	15	24
		% within QCL_1	6.6%	3.4%	5.5%
	2	Count	19	10	4
		% within QCL_1	5.9%	3.1%	1.2%
	3	Count	16	9	7
		% within QCL_1	3.4%	1.9%	1.5%
Total		Count	64	34	35

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis	MAG-Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	1	4	7
		% within QCL_1	0.2%	0.9%	1.6%
	2	Count	3	8	8
		% within QCL_1	0.9%	2.5%	2.5%
	3	Count	2	8	3
		% within QCL_1	0.4%	1.7%	0.6%
Total		Count	6	20	18

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG~Q.3 Magazines Read on a Regular Basis	MAG~Q.3 Magazines Read on a Regular Basis	MAG~Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	7	7	21
		% within QCL_1	1.6%	1.6%	4.8%
	2	Count	2	6	6
		% within QCL_1	0.6%	1.9%	1.9%
	3	Count	3	3	5
		% within QCL_1	0.6%	0.6%	1.1%
Total		Count	12	16	32

QCL_1*$magazinetypes Crosstabulation

			types of magazine[a]		
			MAG~Q.3 Magazines Read on a Regular Basis	MAG~Q.3 Magazines Read on a Regular Basis	MAG~Q.3 Magazines Read on a Regular Basis
Cluster Number of Case	1	Count	7	8	11
		% within QCL_1	1.6%	1.8%	2.5%
	2	Count	6	4	9
		% within QCL_1	1.9%	1.2%	2.8%
	3	Count	5	4	5
		% within QCL_1	1.1%	0.8%	1.1%
Total		Count	18	16	25

QCL_1*$magazinetypes Crosstabulation

			types of ...	
			MAG~Q.3 Magazines Read on a Regular Basis	Total
Cluster Number of Case	1	Count	232	437
		% within QCL_1	53.1%	
	2	Count	189	322
		% within QCL_1	58.7%	
	3	Count	235	471
		% within QCL_1	49.9%	
Total		Count	656	1230

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

We run the frequency and crosstab about people's magazine genre. And find out that the top three most popular magazines among trendy TV lovers are the Better Homes and Garden type magazine (83, 19%), the TV Guide type magazine (78,18.5%) and the Good Housekeeping type magazine (69, 15.8%).

And the top most popular magazine types among remote shopping maniacs are Reader's Digest type magazine (81, 25.2%), the Better Homes and Garden type magazine (56, 17.4%), and Good Housekeeping (48, 14.9%).

Since trendy TV lovers and remote shopping maniacs are more likely to use ESI's new product, and they share two common magazine types: Better Homes and Garden and Good Housekeeping, thus we suggest ESI to focus on putting print ads and having feature story on those magazine.

(14) Whether read books

Oneway

ANOVA

BKS-Q.1 Whether Read Books

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.470	2	2.235	12.070	.000
Within Groups	272.029	1469	.185		
Total	276.499	1471			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: BKS-Q.1 Whether Read Books

Tukey HSD

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	.054	.030	.168	-.02	.12
	3	-.082*	.026	.004	-.14	-.02
2	1	-.054	.030	.168	-.12	.02
	3	-.136*	.029	.000	-.20	-.07
3	1	.082*	.026	.004	.02	.14
	2	.136*	.029	.000	.07	.20

*. The mean difference is significant at the 0.05 level.

Descriptive Statistics

Dependent Variable: BKS-Q.1 Whether Read Books

Cluster Number of Case	Mean	Std. Deviation	N
1	1.23	.421	513
2	1.18	.382	357
3	1.31	.464	602
Total	1.25	.434	1472

From the one-way ANOVA results $F = 12.1, p < .05$, we can tell that there is a statistically significant difference between whether read book and people's intention of using ESI's new product. And the difference is between trendy TV lover and old-fashioned conservative, also between remote shopping maniacis. And from the mean, we can tell that more people in remote shopping manics read books than those among other two groups. Thus, we decide to further our study to see what kind of book they read.

Types of book read regularly.

QCL_1*$booktypes Crosstabulation

			types of book read[a]		
			BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly
Cluster Number of Case	1	Count	223	50	212
		% within QCL_1	56.7%	12.7%	53.9%
	2	Count	165	44	169
		% within QCL_1	56.3%	15.0%	57.7%
	3	Count	197	63	225
		% within QCL_1	47.8%	15.3%	54.6%
Total		Count	585	157	606

QCL_1*$booktypes Crosstabulation

			types of book read[a]		
			BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly
Cluster Number of Case	1	Count	64	24	139
		% within QCL_1	16.3%	6.1%	35.4%
	2	Count	74	22	65
		% within QCL_1	25.3%	7.5%	22.2%
	3	Count	88	24	130
		% within QCL_1	21.4%	5.8%	31.6%
Total		Count	226	70	334

QCL_1*$booktypes Crosstabulation

			types of book read[a]		
			BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly
Cluster Number of Case	1	Count	99	64	9
		% within QCL_1	25.2%	16.3%	2.3%
	2	Count	66	30	3
		% within QCL_1	22.5%	10.2%	1.0%
	3	Count	82	56	7
		% within QCL_1	19.9%	13.6%	1.7%
Total		Count	247	150	19

QCL_1*$booktypes Crosstabulation

			types of book read[a]		
			BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly
Cluster Number of Case	1	Count	64	94	90
		% within QCL_1	16.3%	23.9%	22.9%
	2	Count	30	87	67
		% within QCL_1	10.2%	29.7%	22.9%
	3	Count	28	116	78
		% within QCL_1	6.8%	28.2%	18.9%
Total		Count	122	297	235

QCL_1*$booktypes Crosstabulation

			types of book read[a]		
			BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly
Cluster Number of Case	1	Count	98	36	72
		% within QCL_1	24.9%	9.2%	18.3%
	2	Count	75	42	72
		% within QCL_1	25.6%	14.3%	24.6%
	3	Count	105	26	61
		% within QCL_1	25.5%	6.3%	14.8%
Total		Count	278	104	205

QCL_1*$booktypes Crosstabulation

			types of book read[a]		
			BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly
Cluster Number of Case	1	Count	46	102	21
		% within QCL_1	11.7%	26.0%	5.3%
	2	Count	38	75	27
		% within QCL_1	13.0%	25.6%	9.2%
	3	Count	54	88	27
		% within QCL_1	13.1%	21.4%	6.6%
Total		Count	138	265	75

QCL_1*$booktypes Crosstabulation

			types of book read[a]		
			BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly	BKS-Q.3 Types of Books Read Regularly
Cluster Number of Case	1	Count	48	55	44
		% within QCL_1	12.2%	14.0%	11.2%
	2	Count	30	39	37
		% within QCL_1	10.2%	13.3%	12.6%
	3	Count	56	57	62
		% within QCL_1	13.6%	13.8%	15.0%
Total		Count	134	151	143

QCL_1*$booktypes Crosstabulation

			types of book ...	
			BKS-Q.3 Types of Books Read Regularly	Total
Cluster Number of Case	1	Count	8	393
		% within QCL_1	2.0%	
	2	Count	11	293
		% within QCL_1	3.8%	
	3	Count	16	412
		% within QCL_1	3.9%	
Total		Count	35	1098

Percentages and totals are based on respondents.
a. Dichotomy group tabulated at value 1.

We then run the frequency and crosstab of the type of book they read regularly, we find out that the top three most popular book type among trendy TV lovers are Best Sellers (233, 56.7%), Adventure/Mystery (212, 53.9%), and Romance (139, 35.4%).

And the top three most popular type among remote shopping maniacs are Adventure/Mystery (169, 57.7%), Best Sellers (165, 56.3%), and Biography (87, 29.7%).

Since trendy TV lovers and remote shopping maniacs are more likely to use ESI's new product, and they share two common book types: Best Sellers and Adventure/Mystery, thus we suggest ESI target those book fans.

(15) Shopping Habits

We also analyze and use some shopping habits to describe the customers in our three clusters. Since all related questions are measured through 10-point Likert scales, which are interval level test, we use ANOVA to test the relationships.

First we test the relationship between the Price Consciousness (measured by question "I don't shop for the brand, I shop for the best price") and clusters. A $p = 0.004 < 0.05$, declaring a

significant relationship. According to the post hoc tests, there is a significant difference between the first cluster and second cluster (p=0.004). The mean score in the first cluster is 6.20, higher than 5.65 in the second cluster. Thus we can claim that the people in the first cluster care more about the price. We then recommend the ESI to make the price of their device more affordable. In addition, they can launch some sales campaign, to make the prices of the products on their lists more competitive. In this way, their target audience will think they can find good prices through ESI's device.

Descriptives

SHP-Q.1 I don't shop for the brand, I shop for the best price

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	512	6.20	2.598	.115	5.98	6.43	1	10
2	356	5.65	2.229	.118	5.42	5.88	1	10
3	598	5.88	2.529	.103	5.68	6.08	1	10
Total	1466	5.94	2.492	.065	5.81	6.06	1	10

ANOVA

SHP-Q.1 I don't shop for the brand, I shop for the best price

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	67.253	2	33.626	5.448	.004
Within Groups	9030.720	1463	6.173		
Total	9097.973	1465			

Multiple Comparisons

Dependent Variable: SHP-Q.1 I don't shop for the brand, I shop for the best price

Tukey HSD

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	.552*	.171	.004	.15	.95
	3	.322	.150	.080	-.03	.67
2	1	-.552*	.171	.004	-.95	-.15
	3	-.231	.166	.348	-.62	.16
3	1	-.322	.150	.080	-.67	.03
	2	.231	.166	.348	-.16	.62

*. The mean difference is significant at the 0.05 level.

Descriptives

SHP-Q.1 I often buy things on impulse

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	510	5.22	2.719	.120	4.98	5.45	1	10
2	355	4.43	2.369	.126	4.18	4.68	1	10
3	601	3.89	2.448	.100	3.69	4.08	1	10
Total	1466	4.48	2.591	.068	4.35	4.61	1	10

ANOVA

SHP-Q.1 I often buy things on impulse

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	488.427	2	244.214	38.231	.000
Within Groups	9345.499	1463	6.388		
Total	9833.926	1465			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SHP-Q.1 I often buy things on impulse

Tukey HSD

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	.788*	.175	.000	.38	1.20
	3	1.329*	.152	.000	.97	1.69
2	1	-.788*	.175	.000	-1.20	-.38
	3	.541*	.169	.004	.14	.94
3	1	-1.329*	.152	.000	-1.69	-.97
	2	-.541*	.169	.004	-.94	-.14

*. The mean difference is significant at the 0.05 level.

The shopping habit of buying on impulse has a significant difference among three clusters, yielding a probability of p=.000. Referring to the tukey result, the values of p are all less than 0.05, the differences between the first and second, first and third, second and third clusters are all significant. With a mean score of 5.22, much higher than 4.43 of second cluster and 3.89 of third cluster, the consumers in first cluster are more likely to buy things on impulse.

But there are no significant differences between the attitudes toward advertisements among three clusters, with a p= 0.078>0.05. This descriptor is measured by the question “I tend to be skeptical about claims made in advertising.”

Descriptives

SHP-Q.1 I sometimes buy expensive things just to impress my friends

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	513	2.55	2.336	.103	2.35	2.75	1	10
2	357	2.32	1.866	.099	2.13	2.51	1	9
3	602	1.79	1.629	.066	1.66	1.92	1	10
Total	1472	2.19	1.985	.052	2.08	2.29	1	10

ANOVA

SHP-Q.1 I sometimes buy expensive things just to impress my friends

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	167.433	2	83.716	21.855	.000
Within Groups	5626.936	1469	3.830		
Total	5794.369	1471			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SHP-Q.1 I sometimes buy expensive things just to impress my friends

Tukey HSD

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	.232	.135	.197	-.08	.55
	3	.758*	.118	.000	.48	1.03
2	1	-.232	.135	.197	-.55	.08
	3	.525*	.131	.000	.22	.83
3	1	-.758*	.118	.000	-1.03	-.48
	2	-.525*	.131	.000	-.83	-.22

*. The mean difference is significant at the 0.05 level.

We also find a significant of peer pressure of shopping (“I sometimes buy expensive things just to impress my friends”) among three clusters, with a p = 0.000, less than 0.05. In keeping with the post hoc tests, the means of first cluster is significant different from the mean of the third cluster, so is the means of second and third clusters. But there is no significant difference between the first and second clusters. The mean value of the cluster one is 2.55,

significant higher than the second (2.32) and third (1.79) clusters. Though all these means are not high, we still recommend the ESI to put some of the expensive products to the lists stored in the device. They can also build a reputation of the device, letting consumers take it as a device owned by upper class.

Descriptives

SHP-Q.1 I like to try everything on when I shop for clothes

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	510	5.93	3.199	.142	5.65	6.21	1	10
2	356	5.29	2.914	.154	4.99	5.60	1	10
3	598	5.39	3.274	.134	5.13	5.65	1	10
Total	1464	5.55	3.173	.083	5.39	5.72	1	10

ANOVA

SHP-Q.1 I like to try everything on when I shop for clothes

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	112.774	2	56.387	5.635	.004
Within Groups	14619.070	1461	10.006		
Total	14731.844	1463			

Multiple Comparisons

Dependent Variable: SHP-Q.1 I like to try everything on when I shop for clothes

Tukey HSD

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	.637*	.218	.010	.12	1.15
	3	.541*	.191	.013	.09	.99
2	1	-.637*	.218	.010	-1.15	-.12
	3	-.096	.212	.893	-.59	.40
3	1	-.541*	.191	.013	-.99	-.09
	2	.096	.212	.893	-.40	.59

*. The mean difference is significant at the 0.05 level.

A p= 0.003 < 0.05 indicates a significant difference among the three clusters in their intention to try clothes on when shopping. As stated in the tukey results, the differences between the first and second clusters (p = 0.010) and first and third clusters (0.013) are significant. With a mean value of 5.95, higher than 5.29 and 5.39 of the second and third clusters, the respondents in first cluster are more likely to try things on. One of the major unique characters of the ESI device

is that people can get the virtual self to try different pieces of clothing to evaluate color, coordination, style and other aspects of fit by viewing them on their virtual self. Therefore, emphasizing this character in the ads is one of our recommendations.

Descriptives

SHP-Q.1 I like to browse in stores or window shop

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	513	7.19	2.830	.125	6.94	7.43	1	10
2	356	6.34	2.788	.148	6.05	6.63	1	10
3	599	6.22	3.161	.129	5.96	6.47	1	10
Total	1468	6.59	2.991	.078	6.43	6.74	1	10

ANOVA

SHP-Q.1 I like to browse in stores or window shop

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	289.694	2	144.847	16.531	.000
Within Groups	12836.319	1465	8.762		
Total	13126.013	1467			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SHP-Q.1 I like to browse in stores or window shop

Tukey HSD

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	.849*	.204	.000	.37	1.33
	3	.972*	.178	.000	.55	1.39
2	1	-.849*	.204	.000	-1.33	-.37
	3	.123	.198	.809	-.34	.59
3	1	-.972*	.178	.000	-1.39	-.55
	2	-.123	.198	.809	-.59	.34

*. The mean difference is significant at the 0.05 level.

The next question measures people's intention of window-shopping. The p value of 0.000 less than 0.05 indicates a significant difference. The post hoc tests provide us with p values of 0.000 when testing the differences between first and second clusters, as well as the first and third clusters. The mean of first cluster is 7.19, higher than the 6.34 of second cluster and 6.22 of third

cluster. From such results, we can estimate that the Trendy TV Lovers have a stronger interest in window-shopping.

Descriptives

Reversed I don't like to shop

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	504	7.0873	3.06074	.13634	6.8194	7.3552	1.00	10.00
2	353	6.1105	2.98514	.15888	5.7980	6.4230	1.00	10.00
3	599	6.4357	3.06651	.12529	6.1897	6.6818	1.00	10.00
Total	1456	6.5824	3.06764	.08039	6.4247	6.7401	1.00	10.00

ANOVA

Reversed I don't like to shop

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	219.984	2	109.992	11.863	.000
Within Groups	13472.125	1453	9.272		
Total	13692.110	1455			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Reversed I don't like to shop

Tukey HSD

(I) Cluster Number of Case	(J) Cluster Number of Case	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	.97682*	.21134	.000	.4810	1.4726
	3	.65158*	.18405	.001	.2198	1.0834
2	1	-.97682*	.21134	.000	-1.4726	-.4810
	3	-.32524	.20432	.249	-.8046	.1541
3	1	-.65158*	.18405	.001	-1.0834	-.2198
	2	.32524	.20432	.249	-.1541	.8046

*. The mean difference is significant at the 0.05 level.

Last but not least, we use the question “I don't like to shop ” measure people’s interest in shopping. After reversing the variables, we find that the differences between three clusters are significant, yielding a p of 0.000, less than 0.05. More specifically, the differences between the first and second clusters and first and third clusters are significant, with p values less than 0.05.

The mean of the 7.09, higher than 6.11 and 6.43 of the second and third clusters, suggests that Trendy TV Lovers obtain a stronger interest in shopping than other two clusters.

VI. Conclusions and Recommendations

1. Conclusion

Multiple Regression.

R square tells that three factor explained 23.3% of the total variance.

People's openness to new things is the biggest driver of their future purchasing of ESI's shopping devices, then the perceived preference of shopping by mail, and Attitude towards TV. The other three factors, Perceived entertainment from radio, dependency on telephone and attitude towards interactive technology do not contribute a lot to people's purchase intention.

Cluster Analysis.

By looking at the results of MR analysis, we can identify top 3 factors that predict our dependent variables the best. They are "attitude towards TV", "preference for shopping by mail" and "openness to new things". Combining DV and these three top predictors, we identify respondents by three homogeneous groups.

- Cluster 1 = Trendy TV Lover
- Cluster 2 = Remote shopping maniacs
- Cluster 3 = old-fashioned conservatives

Buyer persona based on demographic characteristics

Based on all the demographic characteristics that we found significantly related to respondents' intention to buy ESI's new product, we come up with a buyer persona of ESI's prospective customers: They are mainly White young adults, who went to college and currently

employed. It's highly possible that they are single and have annual household income between $35,000 and $50,000 and even higher.

Psychographic characteristics

We conclude potential customers' psychographic characters and their behavior habit as followings:

- They have premium channels at home and they like to watch movie channels and news channels; they prefer to watch TV in early morning and evenings, they don't pay much attention to commercial when it's showing on TV.
- They like to listen to music programs on radio, especially classic rock, light/easy listening and top 40/countdown programs. And they will listen to ads.
- They like to rent video, especially movie video. When they rent movie video or go out for movies, action/adventure movies, comedy movies and musical movies are their favorites.
- Most of ESI's potential customers have tape player at home.
- They like to work out and watch sports games on TV.
- They are very much likely to purchase PC within next years and more comfortable with PC.
- They like to watch game shows on TV and play video games as well.
- They enjoy reading magazines especially "Better Homes","Garden" and "Good Housekeeping". They are also book fans and "Best Sellers" and "Adventure/Mystery" are their favorite categories.
- They tend to buy things on impulse and price is their first priority rather than brands. And they tend to buy things because of peer pressure. When they are shopping for clothes, they prefer to try everything on before make decisions.

2. Recommendation

TV

- put advertisement into movie, news channels and premium channels
- dig out news value of the product and pitch story to news channels
- have founder of ESI or developer of new product in talk shows
- put most of their advertisements for their new device in the evening and early morning

Radio

- put ads in between music programs, and less in news reports, talk shows and sports programs
- research for top music program around the country and in different areas
- collaborate with musicians/DJs to let them spread the words for ESI's new product

Video and Movies

- put interesting commercials before the movie begins
- have people promoting ESI's product in the theater/cinema
- sponsor movies
- place advertisements into movies
- promote ESI's product in video rental stores

Sports participation

- put more ads in between sports games, especially those popular ones as basketball and football
- collaborate with the brands in walking, swimming, basketball, football, dance exercise and jogging, to promote their device
- add related clothes to their lists for shopping.

PC

- team up with PC suppliers, such as Best Buy and Staples to promote their products.

- use email marketing to promote new product
- collaborate with PC brands, such as providing discount for ESI product users

Game and other activities

- put ads in games shows
- add game features into ESI's new products
- put ads in video game stores
- sponsor a game show so that can show the new product in the programme by design a special game formula.

Interest in science and math

- use logical approaches to communicate with potential customers
- create more informative ads

Magazine

- Identify the most influential magazine in those area, and put ads
- feature a story by checking their editorial board and see if there any match

Book

- host a book club or some events specialized in adventure books, and combine it with its products feature
- **Privacy Concerns**
- We find that people still have some privacy concerns about interactive technologies and other new technologies. ESI can hold press conference to explain its safety.
- ESI can also work harder to make its device more user friendly and safe

REFERENCES:

Fishbein, M., & Ajzen, I, (1975). Beliefs, attitude, intention, and behavior: An introduction to theory and research. Reading, MA: Addison-Wesley.

Henrichs, R. B. (1995). Factors that impact consumer adoption of innovative technological services over time: The case of Internet, Unpublished doctoral dissertation, Golden Gate University, San Francisco, CA.

Mowen, J. C, & Minor, M. (1998). Consumer behavior (5th ed.). Upper Saddle River, NJ: Prentice-Hall.

Rogers, E. M. (1995). Diffusion of innovations (4th ed.). New York: The Free Press.