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Thesis proposal on the go

REWARDING MOBILE SERVICE USER EXPERIENCE AMONG MATURE CUSTOMERS

Author : Anja Härkönen

Supervisor: Professor Minna Mattila

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1. INTRODUCTION

By the year 2050 the number of older persons in the world will exceed the number of young (under the age of 15) for the first time in history. Population ageing will have an impact on economic growth, savings, investments and consumption (Seniorwatch 2002). Society is in the midst of an information technology revolution comparable in scale and scope to the industrial revolution of the nineteenth century. (Fisk 1999, 311.)Population ageing is a global phenomenon affecting every citizen of the world. By the year 2010 one out of seven people in the USA is expected to be 65 years of age or older (Oumlil et al.2000,232), but ageing population is topically issue also in Finland. Almost half million Finnish people has been born between the years 1945-1951. The birth rate was twofold compared to present birth rate (Levonen 2001, 175). These baby-boomers form very important consumer segment in present market and in future they gain even more importance. As the table 1 shows, the later adulthood is the longest lifestyle stage. An individual` s decision to be committed to a particular lifestyle impacts on a wide range of specific everyday consumer behavior (Shiffman et al.2000,453).

In Europe there is a transformation in the experience and meaning of old age. The retirement is no longer the straightforward entry point to old age and it is increasingly anachronistic as a definition of older age. At the same time, with increased longevity, older people are living longer and healthier old ages and, as a result, the threshold of frailty is being pushed back (Walker & Maltby 1997, 13.)

The growth in the ageing population is likely to affect business in many ways. Companies will have to understand the consumptions needs of older people and how the older market responds to various marketing activities of the firm. Businesses are also likely to be influenced by the ageing workforce and as the population ages many younger workers must provide care for older family members and companies are beginning to feel the pinch of elder-care benefits and employee absenteeism (Moschis et al 1997,282).

Older people are known to be as interested in technology as any other group, if they are properly informed. It is useful to distinguish the market for mainstream products and ser-

vices from that for more specific products and services.Older people feel that they are not adequately regoncised as a potential user group of technological products. They feel that new technologies are always connected with young people in the media (Seniorwatch 2002). Many older people will already be familiar with technology and therefore they show demand for technological products and services. Nowadays ageing people have very active lifestyle and it is also worth remembering that they have better financial possibilities for that than the previous generations. There are many new market opportunities because more user-friendly products attract users and can win market-share(Seniorwatch 2002).

Both mature customers and marketers gain advantages from the studies concerning mature customers. The mature customers´ purchasing power is very significant and marketers can not afford to ignore this consumer segment. The more marketers know about mature customers, the better they can develop products and services which satisfy mature customers´ needs.

Age cohort	Length of lifestyle (years)
Chilhood (0-17)	17
Early adulthood (18-34)	16
Middle adulthood (35-49)	14
Later adulthood (50+)	29

TABLE 1 : Lifetime value of mature customer (Nielson et al. 1997, 320.)

1.1 Research rationale

The subject of this study is mature customers and mobile services. The purpose is mainly to describe what factors affect the usage of mobile services among this special customer

segment. To do that, this study also describes mature customers` perception about technology and its usage.

The mobile service usage is called "rewarding", because theories (e.g Leventhal 1997) about mature customers imply, that the mature customers will use the new product and services, if it can meet a specific need they have (Leventhal1997, 279). In other words, the mature customer have to gain some kind of "reward" from usage.

The study´ s purpose is also to describe mature customers´ general technology perceptions and also discuss about their intention to learn to use mobile services and intention to recommend mobile services to other, mainly for their friends. This study will also discussing the possible obstacles which can preventing the usage of mobile services among mature customers, and also describe the intention to learn and recommend mobile services.

The primary research question is: **What factors affect on mature customers´ rewarding mobile service usage?**

To be able to solve the primary question, these next research questions need also be solved:

- What kind of effect has demographic factors on rewarding mobile service usage among mature customers?
- What kinds of general technology perceptions do mature customers have? What kind of effect has the general technology perceptions on rewarding mobile service usage?
- Which is the mature customers´ s mainly motives for mobile phone usage? What kind of effect do these motives have on mobile services usage?
- What are the barriers in mobile service acceptance among mature customers?

1.2 Aging

Aging is defined as a slow and continuous process that results in the cessation of growth and in physical decline, with a decreasing bodily ability to generate and renew. The aging process is accompanied by modification in sensory processes, strategies of adjustment, problem solving capacities, perceptions, emotional states and memory. According to Wolfbein (1963) aging is associated with changes in life circumstances: a long period in which a couple lives alone after the last child is married and a long period after one partner dies in which the surviving partner lives alone or with grown children or in an institution. (Mauldin 1976, 119)

Aging is more than an individual biological process. Changes in individual perceptions and behavior are not sufficient to promote healthy aging. This will require changing in social norms and beliefs that strongly influence personal perceptions and individual behavior. Thus consideration of social organization and economic relations is fundamental when contemplating aging. Being old is not only a biological fact, it is also a collective construction.(Sabelli et al.2003,767)

Age determines social role, social relations and generational class: youth, young adult, core adult, retirement age and elder. People change sides in intergenerational processes as they move through these stages. Age classes, like gender and economic classes, have bipolar relations with each other. Cooperation and solidarity between generations are more important than conflict. This interaction between generations is a fundamental social process. Age has priority regarding health, and it has the same role as sex, class, and ethnicity in determining social status and personal identity. Yet what makes elders different from other adults is exactly that elders do not function primarily as workers.(Sabelli et al. 2003, 768-769)

Aging means different things to different people; it is also worth remembering that infants are also aging. However, since the adoption of the Social Security Act in 1935 a widely accepted chronological definition is that anyone who has reached the age of 65

automatically attains membership in that sector of the population called "the aging".(Oyer&Oyer 1976,3)

Many rewards come to older people. Changing family and work roles bring about the lessening responsibilities for others, and the luxury of more time and greater proportion of one`s income to devote to self or couple of interest. The freedom to control and plan for the use of one` s own time is considered by many to be the most satisfying aspects of retirement. (Oyer&Oyer 1976,5)

The themes of physical decline, dependency, marginality and passivity and of the natural affinity between elderly and young people, which commonly appear in both verbal and visual imagery, help to sustain certain cultural stereotypes of ageing. Stereotypes act as powerful symbolic markers of identity which are used to attribute characteristics to others. A problem arises, when those so caricatured are not empowered to respond to or reject the labels others put on them through asserting their personal and individual differences from the stereotypical.(Hockey&James 1993,23.) Stereotypes may be used indiscriminately applied to everyone classified as elderly regardless of their health, status and race. (Hockey&James 1993,27.)

1.2.1 Chronological age

Chronological age is defined (Hendricks and Hendricks 1976) the number of years lived
Or as the distance from birth (Barak et al.1981,602) The use of chronological age is problematic for researchers who are interested in age-related research, particularly research that examines the attitudinal or behavioral patterns of the elderly. Chronological age does not lend itself well to functioning as a dependent variable; it is exceedingly difficult to justify employing almost any behavioral variable of interest to consumer researches as a predictor of chronological age. Chronological age does not take into account the fact that people frequently perceive themselves to be at an age other than their birth-age, and this self-perceived or cognitive age seems to influence purchase behavior. It might be expected that consumers would tend to consume many products according to their perceived age and not according their chronological age. This suggests that an indi-

vidual´ s identity and behavior may depend on perceived or felt age than upon chronological age. (Barak et al 1981,602)

1.2.2 Cognitive age and subjective age

Barak and Schiffman (1981) define the concept "cognitive age" in terms of four questions which were designed to correspond to the four dimensional of personal age: feel-age, look-age, do-age and interest-age. They founded that majority of elderly think that their chronological age does not adequately correspond to their perceived age as reflected by any of the four age dimensions. Barak and Shiffman suggest that it maybe so that teenagers might like to perceive of themselves as being older than their chronological age, while the elderly perceive themselves as being younger than their chronological age. They also founded that as chronological age increased , respondents were increasingly likely to identify themselves with younger cognitive age group.(Barak & Schiffman 1981,)

According to Nancy Stephens (1991),cognitive age is a standard demographic measure that produces a group of people who can be reached efficiently and profitably. Cognitive age cannot be an adequate substitute for chronological age but can enhance marketers´ understanding of a large and important group of consumers (Stephens 1991,47).

The cognitive dimensions of age capture distinctly different aspects of age than is reflected by chronological age. Elderly are considerably more like to identify their age related feelings and actions with a younger age group than one which is consistent with their chronological age. The elderly should not be viewed as they are a single group or market segment, with uniform attitudes and behavior. For instance, a consumer who is her sixties might perceive of herself as being in her forties and identify with role models of that age. In such a case, the possibility exists that she really belongs to a different target market than indicated by her chronological age; that is, if she perceives herself to be younger, she actually might belong to a younger target market, even though her chronological age is older. (Barak &Schiffman 1981)

It has been founded that mature customer thinks himself or herself as 15 years younger than his on her actual age. According to Moschis (1995), mature customers often do not identify with other older people.(Kennett, Moschis&Bellenger 1995, 64.)Studies,which have approximated representatives in sample selection report that 60-75 per cent over 60 years old feel younger than their chronological ages. Underhill and Cadwell even reported that over half of adults over 60 feel 16-17 years younger (Stephens 1991, 38) Empirical research on subjective age started in the 1950s and until now the accumulated data showed that , in general, adults in their 20s often perceive themselves as a slightly older than their actual chronological age, whereas adults over 30 years old generally tend to perceive themselves younger than their actual age.(Kaliterna et al 2002,40.)

The phenomenon of cognitive age is said to be a response by older people to age-related changes, such as retirement, physical illness or loss of a spouse. As they progress through their 50s and 60s, older adults continue to feel middle-aged or even young. According to Ward (1977), their cognitive ages are consistent with the lives they are leading until a catalytic event occurs. Frequently, a valued social role is lost and at that point people are forced to re-examine their self concepts and may shift to older cognitive ages. Expressing an older cognitive age has been associated significantly with being retirement as Blau (1956), Philips (1957) and George (1980) founded and with poor health, as several researchers (e.g Blau 1956, Philips 1957 and Bultena and Powers 1978) founded. In addition cognitive age has been significantly linked to some variables which may make life after change more difficult. (Stephens 1991,39)

Older adults who are cognitively young are not very different from middle- aged and younger consumers. They lead active lives and enjoy many of the same goods and services. In general cognitively young may necessitate no special targeting. (Stephens 1991,45) It might be expected that when a consumer who is in his fifties perceives of himself as being in his forties, he identifies with role models of that age. Therefore there is also likelihood that such a person really belongs to a younger target market than indicated by his chronological age. The inappropriate target designation may be factor which contributes higher level of consumer alienation. (Johnson 1994,267)

Van Auken, Barry and Anderson founded that average cognitive age is a separate dimension when contrasted to ideal and least-desired ages. (Van Auken, Barry and Anderson 1993,83.) It is likely that many older women recognize that aging takes its toll on the physical self. For cognitively younger "older" women , however, the internal self seems to permit, and even to encourage, an environment or context that encourages age-incongruent, if no age-irrelevant , activities, interests and feelings to exist and to be enjoyed.(Wilkes 1992,298)

In his study, Wilkes (1992) founded that cognitively younger respondents showed higher self-confidence, a more active life-style orientation, including greater participation in certain activities (Wilkes 1992). Schiffman and Sherman founded in 1991 that life satisfaction does not vary by chronological age, but relationship between life satisfaction and perceived or cognitive age. Cognitive age is sensitive to life satisfaction differences whereas chronological age is not. (Schiffman et.al 1991,191)

Subjective age measures an individual` s self-perception in terms of reference age groups, i.e "middle-aged", "elderly", or "old". The problem in this measure is, that it is subjective how a person feels about such reference age groups. The previous research about subjective age has founded that majority of elderly have a strong tendency to see themselves as considerably younger than their chronological age. It is also stated that elderly, who oerceive themselves as younger as are more likely to be innovative. (Barak et.al.1981, 604.)

1.3 Mobile services

According to Christian Grönroos (2001) services can be defined as "a process consisting of a series of more or less intangible activities that normally, but not necessarily always, take place in interactions between the customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems" (Grönroos 2001, 46.) Services can be classified to high-touch/high-tech services and discretely/continuously rendered services. High-tech ser-

vices are large technology –based services. New technology give customers the means to access the services of a manufacturer more quickly and easier. However it is worth remembering that new technologies used in service processes may not fully be accepted and appreciated by all customers of a given service provider. (Grönroos 2001, 172.)

Technology can be defined as clusters of interrelated technologies structured into technological systems. Mobile phone is part of changing cluster of technologies, where the links and interdependencies between them are changing over time. Mobile telephony and telephony in general in turn constitute a part of the broadsystem of communication and information technology.(Andersson et al. 1997, 456).

Mobile service innovations are defined as any new services that are delivered with the support of wireless devices. Within the telecommunications market, the mobile services market is one of the most dynamic and fastest growing segments. Mobile commerce applications have not been very successful, as many consumers did not adopt these services in combination with the GSM standard. However, telecommunications companies believe that especially the UMTS introduction will lead to a widespread adoption of mobile services in combination with mobile commerce applications.(Blazevic et al. 2003, 120).

According to Barnes (2002) the diffusion of mobile services, where consumers conduct commercial transaction via their wireless device has been poor due to high cost, slow transmission rates, high power consumption of devices and inadequate mobile interfaces. It has been estimated that by 2010 in most developed countries 80-90 percent of consumers are expected to have at least one wireless device. Also mobile phone operators are investing massively in third generation (3G) wireless technologies that possess resilient data capabilities. These 3G networks are expected to overcome especially the low data transmission rates.(Blazevic et al. 2003, 122)

Mobile services have values that differ from other services. The mobile value signifies the value from the mobility. According to Keen and Macintosh(2001) the key value proposition of mobility is the creation of choice, or new freedoms for customers. Other

values are flexibility, convenience and ubiquity. According to Anckar et.al (2002) the m-commerce is going to obtain a dominant channel position in service categories where the use of mobile applications offers customers indisputable mobile value by grasping the very essence of the combination of mobility. (Anckar et al 2002, 50.)

Considering the richness and reach benefits mobile business can be defined as the necessary application infrastructure in order to preserve business relationships and sell information services and commodities via mobile phone. When the electronic world is compared to the mobile world, mobile businesses might contain even more advantages. In terms of richness, mobile businesses can gain more detailed information about the customer, as the mobile phone is very personal device that is often not shared with different customers. According to Blazevic et.al (2003), the mobile behavior can be linked to one person. If the customer has a postpaid contract the mobile operator normally has accesses to detailed personal information and the users´ location can be known when they consume specific services. The additional information provides the opportunity to personalize existing and new services. The company can obtain specific customer information tracking customer behavior, which offers unique opportunities to develop new services. (Blazevic et al. 2003, 122)

Mobile services comprise time and space advantages comparison to Internet services. Mobile services contain a time advantage because companies can deliver service offerings more frequently to the customer as mobile phones are constantly switched on. They include include a space advantage as in mobile service delivery, the customer is reachable at all places, even while sitting in train or in car, for example. When using Internet, users are bound to their computers to access specific service offerings. (Blazevic et. al 2003, 123)

In year 2001, almost half of the European older people (48 %, older people = people aged 50+) had a mobile phone and most of them (42%) also used it. It is worth noticing that about 40 % of older mobile phone owners use SMS short message services. (seniorwatch 2002).The number of mobile phones are growing all the time. In the end of the year 2002

there were 4.5 million mobile phone subscriptions (www.stat.fi). There is no doubt that the growing number of mobile phone users will demand more comprehensive and complicated mobile services (Shih et al. 2002, 211.)

1.4 Outline of thesis

At first the topic of the study was introduced and the basic concepts, aging, different dimensions of age and mobile services were defined. Also the main research question and its other minor questions were outlined.

In chapter 2 the research design and methodology used in this study is introduced. Validity and reliability issues is also discussed in the chapter 2.

Chapter 3 reviews the relevant literature for this study. The chapter has focus on the behaviour of mature customers´, and their relationship with technology usage.

In chapter 4 the theoretical framework of this study is introduced. The chapter contains also a theoretical model of the factors influencing the mature customers´ mobile service usage. The hypotheses are defined also in the chapter 4.

In chapter 5 the basic research findings are listed and the respondents demographic profile is presented. The chapter 6 contains the discussion about affecting variables. At end in the chapters 7 the final model is presented, the limitations and contributions of this thesis is discussed. The suggestions for future research end this thesis.

2 RESEARCH DESIGN AND METHODOLOGY

2.1 Data collection

The study was conducted by using postal questionnaire. Finnish population Register Centre conducted sample by using Stratified sampling. Stratified sampling involves dividing the population into homogenous groups, each group containing subjects with similar characteristics (Cohen et al.1986, 99).The total size of the sample was 3000, which consisted of 1500 50-64 years old Finnish people (50 % men, 50% women) living equally all over Finland and 1500 65-75 years old Finnish people (50% men, 50% women) living all over Finland.

There are not much data either about Finnish mature customers in general or about their mobile service usage. That is why the sample size was determined to 3000 for to get the information about mature customers and their mobile services usage as much as possible. The possibly age related difficulties to respond had also to been taken into account. To get high validity for this study, the sample size was planned to be large. The large sample and high response rate can be considered to give better possibilities to generalize the results.

The age limits are based on previous research. As it was told in introduction chapter, according to Nielson et al. (1997) individual steps to older adulthood at age of 50. The upper age limit, 75 years, is based on previous Finnish research. Finnish define "old people" to be anyone who is older than 75 years (Levonen 2001, 182). This definition had to be taken into account, because the purpose of this study is to study ageing consumers. Because in this study it was wanted to compare both "young" and older mature customers, the sample design was planned to consist 1500 50-64 years old and 1500 65-75 years old.

Questionnaire with cover letter was sent to a sample of 3000 older people identified between the ages of 50 and 75 in the end of May 2003.The respondents were given one

week time to return the questionnaire and after one follow-up mailed in early June 2003 altogether 1515 responses were received. Exactly 1500 responses were usable making a final response rate of 50 percent. 15 responses were rejected because they were blank or indiscreet.

The questionnaire consisted of 27 multiple-choice questions and it was same to 50-64 years old respondents as to 65-75 years old respondents. Questions handled aging customers´ opinion about technology in general and mobile phones and mobile services in special. The questions and choices for answer were based on interviews of mature customers which were conducted in February and April 2003.

2.1.1 Data analysis

The gathered data was in quantitative form and it was assessed statistically by SPSS and Excel. Statistical methods as one-way variance analysis ANOVA, chi-square test, t-test, Pearson correlation coefficient, Spearman´ s rank correlation coefficient and factor analysis.One-way analysis of variance, ANOVA, can be used to test the significance of differences within a sample or between different samples. One- way analysis of variance test whether the means of several samples are significantly different for a single variable. (Douglas et.al 1983, 245.)

To use ANOVA certain conditions must be met. The samples must be randomly selected from normal populations and the populations should have equal variances. In addition, the distance from one value to its group´ s mean should be independent of the distances of other values to that mean. ANOVA is reasonably robust, and minor variations from normality and equal variance are tolerable. (Cooper et al.1995, 457.)

The one-way analysis of variance, ANOVA, is the statistical test applied to data collected on the basis of a simple randomized subject design. ANOVA is a statistical procedure that allows researcher to estimate the probability that the observed difference between means of different groups. The process is to partition the total variation in any data set represents a measure of the overall variation of the scores obtained from all participants

within the experiment. Total variation is calculated by summing the squared deviations of all the scores from the mean of all scores:

$$\text{Total variation} = \sum X^2 \; \_ \; \frac{(\sum X)^2}{N}$$

where X = individual scores

N = total number of scores

Total variance can be divided into two estimates of independent variation : the variation within the various treatment groups and variation, which reflects variation between the various treatment groups. (Christensen 1997, 453 – 454.)

The within-groups variation is a measure of the variation of the responses of the research participants within the experimental treatment groups. It is a measure of chance variability, because all research participants within each experimental group should be treated the same way or be exposed to the same treatment condition. The between-groups variation is a measure of two different sources of variability in the data. The one source is the effect that may be produced by the independent variable. The other source of variation is the effect of the chance factors.(Christensen 1997, 454-455.)

The chi-square test is probably the most widely used nonparametric test of significance. It is useful in tests involving nominal data but it can be used for higher scales. This technique is used to test for significant differences of data among categories. The value of χ^2 is the measure that express the extent of this difference. The larger the divergence, the larger is the χ^2 value. (Cooper et al.1995, 447.) The chi-square test was used to clarify factors´ relationships on mobile phone usage. The chi-square test can test whether a sign.The chi-square test can be used also to test the significance of differences between two independent groups. (Tull et al. 1973, 197-198.)

One of the best known coefficients of association for rank-order data is Spearman´ s rank correlation coefficient, r_s. The coefficient is appropriate when there are two variables per object, both of which are measured on an ordinal scale so that objects may be ranked in two ordered series. (Churchill 1995, 929.)

The Pearson (product moment) correlation coefficient varies over a range of +1 through 0 to -1. The designation *r* symbolizes the coefficient´ s estimate of linear association based on sampling data. The coefficient ρ represents the population correlation. Correlation coefficients reveal the magnitude and direction of relationships. The magnitude is the degree to which variables move in unison or opposition. The correlation can have either a positive or negative sign. The sign tells only the direction of the relationship, it does not say anything about the size of correlation. When two variables have positive relationship it means that large values on one variable are associated with large values on the other (and small values with small values), as one increases, the other also increases. The negative correlation means that large values on the first variable are associated with small values on the second and vice versa. (Cooper et.al 1995, 479.)

The general purpose of factor analysis is to summarize the information contained in a large number of variables into a smaller number of factors. Factor analysis refers to a diverse number of techniques used to discern the underlying dimensions or regularity of phenomena. Each factor loading is a measure of the importance of the variable in measuring each factor. Factor loadings provide a means for interpreting and labeling the factors. In addition to the factor loadings, the factor analysis table portrays a percentage of total variance of the original variables explained by each factor. Each individual observation has a score or value associated with each of the original variables. Factor analysis procedure derive factor scores that represent each observation` s calculated value or score on each of the factors. The factor score will represent an individual´ s combined response to the several variables representing the factor. (Zikmund 1991, 574-576.)

In addition to reducing a large number of variables to manageable number of dimensions, factor analysis may also reduce the problem of multicollinearity in multiple regression. If several independent variables are highly correlated, a factor analysis as a preliminary step prior to regression analysis and use of factor scores may reduce problem of having several intercorrelated independent variables. Communality is a measure of the percentage of a variable´ s variation that is explained by the factors. A relatively high communality

indicates that a variable has much in common with the other variables taken as a group. (Zikmund 1991, 576.)

2.2 Research design

A research design is the framework or the plan for the study, which is used as a guide in collecting and analyzing data (Churchill 1995, 144). Donald R. Cooper and C. William Emory (1995) give three essential to research design. According to them research desing is firstly plan for selecting the sources and types of information used to answer the research question. Secondly, it is a framework for specifying the relationships among the study variables. Thirdly, it is a blueprint that outlines each procedure from the hypothesis to the analysis of data. The design provides the answers for such questions: What techniques will be used to gather the data? What kind of sampling will be used? How will time and cost constraints be dealt with? (Cooper et.al 1995, 114.)

Research designs can be classified into three basic types in the terms of the fundamental objective of the research: exploratory, causal and descriptive. Although the classification of the research design types is useful for gaining insight into the research process, the distinctions are not absolute. Any given study may serve several purposes, but certain types of research designs are better suited to some purposes than others. The crucial tenet of research is that design of the investigation should stem from the problem. Each of these three types, exploratory, causal or descriptive, is appropriate to specific kinds of problems. On the other hand, whether or not the designs are useful in a given problem setting depends on how imaginatively they are applied. Researchers need an understanding of the basic designs so that they can modify them to suit specific purposes. (Churchill 1995, 146.)

The general objective of exploratory research is to gain insights and ideas. This research design is particularly helpful in breaking broad, vague problem statements into smaller, more precise subproblem statements in the form of hypothesis. Exploratory research can

be used to establish priorities in competing explanations. It is also used to increase the nalyst´s familiarity with the problem and to clarify concepts. In general exploratory research is appropriate to any problem about which little is known. (Churchill 1995, 148-149.)

Despite its obvious value, researchers and managers alike give exploratory research less attention than it deserves. There are strong pressures for quick answers, and because exploration is sometimes linked with to old biases about qualitative research: subjectiveness, nonpresentativeness, and nonsystematic design. It is worth noticing that the objectives of exploration can be accomplished with several data collection techniques. Both qualitative and quantitative techniques are applicable although exploration relies more heavily on qualitative techniques. (Cooper et al 1995, 118.)

There are four types of exploratory studies; literature search, experienced survey, focus groups and analysis of selected cases. Literature search is one of quickest and cheapest ways to discover the hypotheses of the work of others. The search may involve conceptual literature, trade literature and published statistics. The experienced survey, sometimes called the key informant survey), attempts to tap the knowledge and experience of those familiar with the general subject being investigated. (Churchill 1995, 150-151.)

The third type of exploratory studies is focus group. Focus group is a panel of 8-12 respondents led by a trained moderator. The moderator uses group dynamics principles to focus or guide the group in an exchange of feelings, ideas and experiences on a clearly understood topic. The topical objective is often a new product or product concept.(Cooper et al. 1995, 120.) The analysis of selected cases is sometimes referred to as the analysis of "insightstimulating examples". The approach involves the intensive study of selected cases of the phenomenon under investigation. (Churchill 1995, 161.)

Causal studies typically take the form of experiments, because experiments are best suited to determine cause and effect. (Churchill 1995, 145) The essential element of causation is that *A* produces *B* or *A* forces *B* to occur. A causal research design is concerned

to determining cause-and-effect relationships. The scientific notion of causality is very different from the common sense notion. First, the common-sense notions suggest that there is a single cause of an event. The scientific notion holds that X would only be one of a number of determining conditions. The scientific notion also suggests that X can be a cause of Y if the occurrence of X makes the occurrence of Y more likely or more probable. Finally the scientific notion implies that we can never prove that for X of Y. Rather it can be inferred but never proved that a relationship exists. The inference is typically based on some observed data, perhaps acquired in a very controlled experimental setting. The scientific notion regocnizes the fallibility of such procedures, and suggests that there are three basic kinds of evidence which can be used to support scientific inferences. These types are concomitant variation, time/order of occurrence of variables and elimination of other possible causal factors. (Churchill 1995, 190-191)

2.2.1 Descriptive Research

Descriptive research is, according to Best, concerned with conditions or relationships that exist, practices that prevail; beliefs, points of view or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing. Descriptive research is also concerned with how what is or what exists is related to some preceding event that has influenced or affected a present condition or event. (Cohen et al1986, 68.)

The objective of a descriptive study is to learn the who, what, when, where and how on topic (Cooper et al.1995, 120). A great deal of marketing research can be considered descriptive research. According to Churchill (1995) it is used when the purpose is

1. to describe the characteristics of certain groups
2. to estimate the proportion of people in a specified population who behave in a certain way
3. to make specific predictions.

A good descriptive study presupposes much prior knowledge about the phenomenon studied. It rests on one or more specific hypotheses. These conjectural statements guide

the research in specific directions. In the respect, a descriptive study design is very different from an exploratory study design. Whereas an exploratory study is characterized by its flexibility, descriptive studies can be considered rigid. (Churchill 1995, 164-165.)

Descriptive research attempts to identify variables that exist in a given situation and, at times, describe the relationship that exist between these variables. Therefore descriptive approach is widely used and us of great importance. This approach is used especially when some new are investigated, and researcher tries to identify existing factors and relationships among them. This kind of knowledge is used to formulate hypotheses, to be subjected to experimental investigation. Descriptive method is also used to describe the status of the situation once a solution, suggested by experimental analyses, has been put into effect. At this case, the descriptive method can be provide input regarding the effectiveness of the proposed solution as well as hypotheses about how a more effective solution can be reached. The descriptive method is useful in both of the initial and the final stage of investigations into a given area. (Christensen1997, 45-46.)Descriptive research will attempt to determine the extent of differences in needs, perceptions and characteristic of subgroups (Zikmund 1991, 33).

Descriptive studies can be divided to longitudinal and cross-sectional designs. The cross-sectional study is the most common and most familiar. The objective of cross-sectional analysis is to establish categories so that classification in one category implies classification in one or more other categories. It typically involves a sample of elements from the population of interest. The cross-sectional study has two distinguished features; firstly it provides a snapshot of the variables of interest at a single point in time. Secondly, the sample of elements is typically selected to be representative of some known universe. Therefore, a great deal of emphasis is placed on selecting sample members, usually with a probability sampling plan, and that is why this technique is often called a sample survey. The probability sampling plans allows the sampling error associated with the statistics generated from the sample, but used to describe the universe, to be determined. The large number of cases usually resulting from a sample survey also allows for cross-classification of the variables. (Churchill 1995, 177.)

The survey is maybe the most commonly used method in descriptive research. Typically surveys gather data at a particular point in time with the intention of describing the nature of existing conditions or identifying standards against which existing conditions can be compared or determining the relationships that exist between specific events. Surveys may vary in their levels of complexity from those which provide simple frequency counts to those which present relational analysis. (Cohen et al. 1986, 94.)

In the survey, direct contact must be made with the individuals whose characteristics, behaviors or attitudes are relevant to the investigation. The survey is a technique that is applicable to a wide range of problems and it is fairly easy to use. Thought it is worth remembering that survey is not only list of questions, but the formation of questions requires a lot of though and work. (Christensen 1997, 63.) One common criticism of survey data is that they typically do not penetrate very deeply below the surface, since breadth is often emphasized at the expense of depth. Second disadvantage is that a survey is expensive in terms of time and money. It will often be month before a single hypothesis can be tested because of the necessary preliminaries so vital to survey research. This kind of research also requires a good deal of technical skill.(Churchill 1995, 180.)

Longitudinal studies involve panels. A panel is affixed sample of elements, which can be stores, dealers, individuals or other entities. The sample members in a panel are measured repeatedly, as contrasted to the one-time measured in a cross-sectional study. There are two types of panels, true panels and omnibus panels. True panels rely on repeated measurements of the same variables. In an omnibus panel, sample of elements is still selected and maintained, but the information collected from the members varies. The main disadvantage of the panels is that they are non- prepresentative. The agreement to participate involves a commitment on the part of designated sample member and some members refuse this commitment (Churchill 1995, 166-167, 175)

Correlational study is also one form of descriptive research design. The correlational study consists on measuring two variables and determining the degree of relationship be-

tween them. It can be also incorporated into other descriptive research approaches. Correlational studies do not make any attempt to manipulate the variables of concern, but simply measure them in their natural state. The correlational approach enables research to accomplish the goals of prediction. If a reliable relationship is found between two variables, then it is only described the relationship between these two variables, but also have gained the ability to predict one variable from a knowledge of other variable.(Christensen 1997, 53.)

This study represents the descriptive research. It describes the characteristics of certain groups. It identifies variables that exist in a given situation: *"From which variables the rewarding mobile service usage is consisting?"* This study describes the relationship that exist between these variables: "*What kind of effect these variables have on rewarding mobile service usage?" "How they correlate?"* Descriptive approach is used especially when some new are investigated: *mature customer as mobile services user.* The used research method, survey, is also very typical to the descriptive resear

2.3 Reliability and validity

A well-designed study attempts to control for the effects of all extraneous variables. Validity is one of the basic demands for the study. A study is said to have validity if it does collect the appropriate data needed to answer the questions or objectives stated in the first stage of the research (Schiffman et.al 2000,22). Validity can be divided into two major forms; internal and external validity. (Cooper et.al 1995, 149). Internal validity refers the ability to attribute the effect that was observed to the experimental variable and not to other factors (Churchill 1995, 202).

The relationship between internal and external validity is a bit problematic. When external validity is increased, internal validity tends to be sacrificed and when internal validity is increased , external validity tends to suffer. The same features that maximize the possibility of attaining internal validity limit the external validity by excluding different persons, settings and times. However, if an experimenter tried to maximize external validity by conducting the experiment on diverse group of individuals in many settings and dif-

ferent points in time, the experiment´ s internal validity would tend to decrease. Because of that, the first and foremost objective should be the identification of the influence of a treatment effect. Once an effect has been verified by means of well-controlled, internally valid studies, external validity can be investigated. (Christensen 1997, 490-491.)

The similarity of results provided by independent but comparable measures of the same object, trait, or construct is called reliability. It is distinguished from validity in that validity is represented in the agreement between two attempts to measure the same trait through maximally different methods, whereas reliability is the agreement between two efforts to measure the same trait maximally similar methods. If a measure is valid, it reflects the characteristics that is supposed to measure and is not distorted by other factors, either systematic or transitory. Evaluating the reliability of any measuring instrument consists of determining how much of the variation in scores is due to inconsistence in measurement. The reliability of the instrument should be established before it is used for a substantive study and not after. (Churchill 1995, 539.)

The reliable instruments are robust, they work well at different times under different conditions. The distinction of time and condition is the basis for frequently used perspectives on reliability: stability, equivalence and internal consistency. A measure is said to be stable if you can secure consistent results with repeated measurements of the same person with the same instrument. Stability measures in survey situations are more difficult and less attractive than for observation studies. While it is possible to observe a certain action repeatedly, it is possibly to resurvey only once. (Cooper et al. 1995, 153.)

The equivalence measure if reliability focuses on the internal consistency of or internal homogeneity of the set of items forming the scale (Churchill 1995, 540). Thus, while stability is concerned with personal and a situational fluctuation from one time to another, equivalence is concerned with variations at one point in time among observes and samples of items. A good way to test for the equivalence of measurements by different observes is to compare their scoring of the same event. The major interest with equivalence is typically not how respondents differ from item to item but how well a given set of

items will categorize individuals. There may be many differences in response between two sample of items, but if a person is classified the same way by each test , then the tests have good equivalency. (Cooper et al 1995, 154.)

A third approach to reliability uses only administration of an instrument or test to assess consistency or homogeneity among the items. Cronbach´ s Coefficient Alpha is one of the frequently used ways to test internal consistency. Cronbach`s Alpha has the most utility for multi-item scales at the interval level of measurement. (Cooper et. al 1995, 155.)

Coefficient alpha routinely should be calculated to assess the quality of measure. It is pregnant with meaning because the square root of coefficient alpha is estimated correlation of the k-item test with errorless true scores. (Churchill 1995, 542.) In early stages of research, the acceptable reliability of measurement instrument is .50 - .60. For basic research the acceptable reliability of measurement instrument is .80 - .90. In contrast to the standards in basic research, in many applied settings a reliability of .80 is not nearly high enough. In Basic research, the concern is with the size of correlations and with the differences in means for different measures involved, for which purposes a reliability of .80 for the different measures involved is adequate. (Nunnally 1967, 226.)

In this study reliability and validity issues were taken into account when planning the questionnaire and interpreting the gathered data. As mentioned before, most of the questions and multiple choices were based on interviews of mature customers. That way it could be guaranteed that questions and answer choices were valid. In this study all used scales were based on previous literature and research. For example, the scale for measuring cognitive age was adapted from Barak (1987). For ensuring the reliability, several analyzing techniques were used. The reliability was tested also by suing Cronbach´ s alpha coefficient. The results can be considered to be reliable, because they are based on large amount of responses. The final response rate was also very high, which also improves reliability.

3 LITERATURE REVIEW

3.1 Mature markets

The growth in the aging population is likely to affect business in a number of ways. First, companies will have to understand the consumption needs of older people and how the older markets respond various marketing acts of the firm. Businesses have already begun to respond the needs of the aged population by developing new products or modifying existing ones. Secondly, businesses are likely to be influenced by the aging workforce. For example, firms have already begun to realize that keeping an older person on the job may be more desirable that it has been in the past. Thirdly, as the population ages many younger workers must provide care for older family members. (Moschis et.al, 1997, 282.)

The mature customer is a complicated market, and many see this market as a group of vulnerable old people. New York Times conducted a survey in 1995, and 46 percent of respondents felt most older people could adapt the change. (Levethal 1997, 276.)

Mature customers are said to have lot of many, and that they love to spend it. However, previous studies indicates that older customers hold on their money. There are couples of suggestion, why elderly save their money. Firstly, it is possible that they do not have as many needs fro products and services or they can also be concerned with having to pay unexpected major expenses, for example health care. One possibly reason can be that because nowadays people retire quite early and live longer, they need also to finance a longer post-retirement. It is important to remember, that having money does not necessarily mean spending it. (Moschis 1991, 34.)

The segment of mature customers is demographically the fastest growing segment in the United States and has the highest discretionary income per capita. They also differ in the psychological rationale behind their purchases; they tend to use products and services that

enrich their lives, enable them to connect with others and help them enjoy beauty of the world. (Bone 1991, 47.)

Mature market is rich with opportunity. Yet today´ s mature customers are active, alive and adventurous, they are among the most creative people of our society. (Nielson & Curry 1997, 321.) Relationship building takes time but with mature markets, the payoff can be well worth the extra time spent in developing such a relationship. If 50-plus are considered to be defining point of mature market customer, this person will spent two years in this lifestage. Even if the defining point is raised to 55 - or 60– plus , maturity represents this single longest lifestage among all other traditional marketing segments. The values of the mature individuals are much more likely to remain stable compared with the ever-changing values of younger age cohorts, so a company that makes the long-term commitment to older individuals has the opportunity to retain them for longer. (Nielson and Curry 1997, 320.)

The marketers largely have not come to terms with aging in the marketplace, perhaps because many marketers have not come to terms with their own aging. A person who disdains their own aging cannot understand older because they cannot empathize with them. To experience empathy with mature customers means to see age as a positive development. Cohen (1989) founded that older people generally feel more positive than younger people about their current lives. Having positive feelings absolut age when life remaining is short may seem illogical to a young person who loathes his or her own aging , but the point at hand stands: the inability to feel positive about one´ s own aging is a barrier to understanding older people. (Wolfe 1997, 295.)

Mature market is often thought as homogenous market, which is consisting of people with more similarities than differences. This is hardly true, because with age people become more dissimilar than similar. Marketers should consider mature market as a set of subsegments, each containing individuals with some similarities , but each markedly different from other subsegments. (Moschis 1991, 37.)

Chronological age is not the best way to segment mature market. Instead, the previous research has suggested five variables - discretionary income, health, activity level, discretionary time and response to other - which have meaningful marketing implications. Each of these five variables can be dichotomized and then combined in a full factorial manner to obtain 32 diverse segments. These are likely to range greatly in size since the five segmentation criteria are not necessarily exhaustive nor totally independent of each other.(Bone 1991, 53.)

Although the ageing market consist of very different segments, there are a few common characteristics. They have a strong desire for information and education. Because of that an increase in product information will be needed to meet the needs of more experienced, educated and sophisticated consumers. Other is the expectation of the competent service(Dychtwald 1997,275).

According to Schiffman and Sherman (1991) an important vanguard segment of elderly customers are emerging as an "ageless market". Such a dynamic market requires that age be defined in terms of value orientations, life-styles and life satisfaction adjustment as well as cognitive age. (Schiffman et.al.1991,193.)

3.2 Mature customers

There is little consensus among research as to the chronological age at which a customer becomes part of the mature market. Research have considered anywhere between age 45 and 65 as the beginning as the beginning of "maturity". Paula Fitzgerald Bone defines the mature market as individuals age 50 and over since most marketers ignore customers over 49 years. In addition, many researchers suggest using four age-related segments: 55-64, 65-74, 75-84 and 85+. (Bone 1991, 48.) On the other hand, according to Finnish author Alalääkkölä, the mature customers are typically defined as be 65 years and older. This typical "age limit" 65 years is the most typical age to retire in western countries (Alalääkkölä 1994, 19).

James R. Lumpkin and Barnett A. Greenberg (1982) were of the opinion that the classification of the elderly as 65 and older, the traditional retirement age is not appropriate. They saw that finer age categorizations are needed if marketers are fully to understand when and why changes in marketplace behaviour occur, although they admitted that some changes develop in consumer behaviour upon retirement. (Lumpkin&Greenberg 1982, 84.)

George P. Moschis (1991) criticizes studies of "older adults". According to him, the lack of common definition of mature or older consumers is one problem of the study of older adults. The definitions vary from the age median up to 65 or even 75. A study using 65 as a cut off in comparing "older" and "younger" responses can come up with different results than a study reporting differences between those under and over 50. The statements about the consumer behavior of older people are based less on proven facts and more on speculations and inferences drawn from demographic data.
(Moschis 1991, 36 - 37.)

According to Richard Leventhal (1997), today´s mature customer is like everyone else, most of them feel 20-25 younger than they really are. Because of that, they may not have a problem to identifying with the younger marketer, no matter how old they are perceived to be. Basic character traits do not change with age. Some are keen , some not so keen; some are bright and some are "surfing the net", and then there are some who have little tolerance for new technology. However, Levethal says that nowadays aging customer will act and look far younger than any age group before, but, he reminds, mature customers are still different from the young. (Leventhal 1997, 277.) Lifelong learning is very popular among older people. It is a vital element in maintaining healthy cognitive function. It has also be found that ongoing mental stimulation as well as physical activity are important elements in maintaining a so called healthy mind.(Adler 2002,12.)

Older people are commonly shown acting out values more characteristic of younger people in scenes of self-indulgence reflecting the egocentric "me first" orientations of the youth. Rarely older people are shown expressing altruistic values which increasingly influence their consumer behavior as they age. (Wolfe 1997, 294.)

Many elderly are aggressively seeking new experiences and creative personal challenges. Consuming for the sake of consuming in uninviting, consuming for great experience has merit. Older consumers generally rely more on prior experience or internal sources of information than on external sources, like advertising or word-of-mouth, to evaluate new product or services.(Schiffman et.al 1991,189-190)

In order to serve effectively the needs of the mature segment, service providers must understand the barriers that prevent the elderly from exercising their rights as consumers. Many aging individual suffer from what psychologists term "learned helplessness"(Oumlil&Williams 2000,234)

According to theory, once people perceive that responding will not be effective in bringing about a highly aversive outcome, they attribute their helplessness to a particular reason or cause. According to LH theory in humans, once people perceive that responding will not be effective in bringing about a highly desired outcome or in preventing a highly aversive outcome, they attribute their helplessness to a particular reason or cause. Psychologists have been able to relate the type of attribution chosen by the individual to the severity of helplessness in that individual and the likelihood that the helplessness will recur in different situations. Studies have classified the subjects´ feeling of uncontrollability along three dimensions: internal-external, stable-unstable, and global-specific. (LaForge 1989,360)

These dimensions of uncontrollability are: internal-external, stable-unstable and global-specific. The dimension of internality-externality predicts the type of helplessness. Personal helplessness occurs when an individual believes that there exists response that might produce the desired outcome, although he or she is incapable of producing the nec-

essary responses. Universal helplessness occurs when an individual believes that an outcome is independent of all of his or her own responses as well as the responses of other. In cases of universal helplessness, individuals tend to blame the problem on environmental factors. (LaForge 1989, 361)

The theory makes a distinction between personal and universal helplessness. Personal helplessness comes into being when a person expects that the outcome is contingent not on any response in his/her repertoire nor in the repertoire of a relevant other. Lowered self-esteem occurs in personal helplessness.(Vålas 2001,72)

Attribution along the stable-unstable continuum determine the effects across different situations. An attribution to global factors predicts that helplessness deficits need not recur when the situation changes. Laboratory studies of the effects of uncontrollability on humans suggest that consumers who expect that they are not able to respond in any way that will change the likelihood of satisfactory complaint resolution will exhibit helplessness deficits of passivity, learning impairment, and emotional frustration. Results of human helplessness studies also suggest that a consumer who perceives that successful complaint resolutions are possible but unobtainable for him will experience lowered self-esteem as well. In some cases, an individual `s experience with uncontrollability in a consumer complaint situation may lead to inappropriate generalizations on the part of the individual that future complaint outcomes are also uncontrollable.(LaForge 1989, 361)

The previous studies show that lifestyles of older people do not differ from those of younger adults. Also gerontologists do not regard personality traits of older adults on which lifestyles are based as powerful determinants of the older person´ s behavior, since there are few changes in personality in later life. (Moschis 1991, 35.)

Often the behavior of the older people is explained by one of two models, either the biophysical model or psychosocial model. Biophysical model is based on biological and physiological changes associated with aging. The other model, psychosocial, explains for example elderly´ s low propensity to try new products to psychological reasons, such as

fear of the unknown, the fact that elderly are set in their own way s and do not like changes. Many new-product recommendations for the mature customers are based on this, psychosocial, model. It is often assumed that because older adults are likely to have both the psychological need and the money, they are going to buy the product. But it is seldom asked, if they are willing to spend the money, how they think others might perceive them, and whether use of the product or service would them feel too dependent or admit to the "old age" status. (Moschis 1991, 36.)

Morris B. Holbrook (1999) defines consumer value to be the combination of three concepts, interactive, relativistic and experience, consumer value is "an interactive relatistivic preference experience". Consumer value is interactive, because consumer value entails an interaction between some subject and some subject. The subject is a consumer or customer and object is product. By relativistic, Holbrook means that value is comparative, personal and situational. Value is comparative because legitimate value judgments involve relative preferences among objects for a given person rather than utility comparisons among people. Legitimate value statements involve interpersonal comparisons among different objects assessed by the same individual. (Holbrook 1999, 5.)

Value is personal in the sense that it varies from one to one individual to another. It should be noted that personal relativity of consumer value accounts why marketing is needed. The basic principle of marketing claims that customers differ and differences in valuation lie at the heart of market segmentation. The personal relativity of consumer value shapes the logic of market segmentation and thereby holds the key to marketing effectiveness. It can be said that consumer value is the foundation of all marketing and its personal relativity is the fundamental basis for marketing successfully. (Holbrook 1999, 7.)

The situation-specific nature of consumer value occurs because the standards on which evaluative judgments hinge tend to be context-dependent, changing from one set of circumstances or one time frame or one location to another. To a marketer, this means that preference functions , which relate liking to product attributes, tend to vary from moment

to moment and from place to place. According to Holbrook, consumer value is experience, because consumer value resides not in the product purchased, not in the brand chosen, not in the object possessed, but rather in the consumption experiences derived therefrom. (Hollbrook 1999, 7.)

According to David Wolfe, there are five key values that are affecting on the consumption of mature customer. These values are autonomy and self-suffiency, social and spiritual connectedness, altruism, personal growth and revitalization. Autonomy has to do with the control. When the live is out of control, people feel helpless. This has to do with those forces which can affect control, limiting or impacting in any way our ability to take control. The mature customers especially feel the need to control their lives in a different way. Many corporations are cutting various benefits, so that mature customers are being forced to adopt stronger self-suffiency measures for providing for their own future in terms of pensions and retirement funds. This indicates that autonomy and self-suffiency are even going to be more important to the customers as they age. (Leventhal 1997, 277).

Connectedness is largely a social issue, although at times it may also have a spiritual overtone. It has to do with informality, neighborliness, customer friendly companies, but also has to do with meeting new people and, most important, intergeneration connectedness. Companies that do intergenerational advertising, look patronize to the older customer. It compromises their autonomy and self-suffiency. Altruism is the third key value. Altruism means the desire to give something back to the world and a strong influence in mature customers ´ lives. For example, Thrifty car Rental did some marketing research that showed that 11 percent of its older customers cared about a 10 percent "Senior discount" when compared with 41 percent of its mature customers who would choose an opportunity to donate that discount help buy vans for "senior citizens centers". (Leventhal 1997, 278.)

The last two values are personal growth and revitalization. Personal growth is very important to mature customers. They respond well when they are portrayed as still developing and leaning human beings. Tributes to the accomplishments of older people, don´ t

sell products but they show a position that a company can take in the mature customer´ s mind portraying older people as still developing individuals – such can produce a strong, positive images as long as it is realistic. While younger adults may seek escapist activities in their leisure time, it is important to realize that older adults seek out pursuits that enable them to revitalize themselves through active participation. (Leventhal 1997, 278.)

The fifth and last of the Wolfe` s value is revitalization. Teaching and volunteering are two of the most important aspects of revitalization. When marketers are showing mature customers considering or actually engaging in revitalization activities, they are let know that marketers not only understand them but also appreciate them. (Leventhal 1997, 278.)

Schiffman and Sherman (1991) have identified a "new-age elderly" segment of elderly. This segment differs from the traditional elderly in that they are less concerned with material possessions and more interested in seeking novel experiences, personal challenges and new adventures. As a subgroup of older consumers, new-age elderly have especially strong convictions that age is a state of mind and that has little to do with one´s chronological age. They perceive themselves to be different than other older people. They "feel" younger, "think" younger and "do" younger and they have youthful outlook above they undertake. (Schiffman et al. 1991, 188)

Two personality or individual difference traits appear to characterize members of the new-age elderly subculture. One factor is the greater self-confidence they exhibit when it comes to making consumer decisions. Schiffman and Sherman founded in their studies that many mature and older consumers are particularly self-confident about their decision making skills. In one of their studies, a majority of elderly respondents did not appear to be concerned that they would make mistakes when it comes to what they buy. A second personal factor that seems to be strongly influence on new-age elderly consumers´ reactions to change , and their acceptance of new products and services is the degree to which their anticipated consumption is perceived to provide an opportunity to make them feel more in control of their own lives. In making consumer decisions, new-age elderly want to be responsible for the consequences of their actions. Schiffman and Sherman suggest

that marketers should attempt to create products and services that enhance older consumers´s sense of accomplishment and feeling that they are in control of their own destiny. (Schiffman et al. 1991,189)

Schiffman`s&Sherman´s research indicates also that those older individuals with higher rather than lower life satisfaction scores are more likely to embrace an outlook that is open to the consuming of experiences over new products. (Schiffman et al. 1991,189)

The value orientations of the new-age elderly are quite different from those of traditional elderly. However, no such differences are apparent between chronological-age based segments. New-age elderly are more in control of their life compared to traditional elderly and more decisive consumer compared to traditional elderly. They (new-age elderly) are also more individual decision makers and they are also satisfied to a greater extent compared to the traditional elderly.(Mathur et.al 1998,272.)

According to Schiffman and Sherman (1991),new-age elderly are particularly discerning, skillful, and knowledgeable consumer. They know what they want, they respond well to products and services that satisfy a real need, and they can see through superficial or trivial product variations, or products or practices for which they may have little sustained need or interest. They are also unwilling to accept new products that unduly focus on negative age-related health and medical needs. (Schiffman et al.1991, 190.)

New-age elderly	Traditional/stereotypical Elderly
Perceive themselves to be different in outlook than other people their age	Perceive older people to be about the same in outlook
Age is seen a state of mind	Age is more of a physical state
See themselves as younger than their chronological age	See themselves at or near their chronological age
Feel younger, think younger, do younger	Tend to feel , think and do things they feel match their chronological age
Have a genuinely youthful outlook	Feel that one should act one´s age
Feel there is considerable adventure in living	Feel life should be dependable and routine
Feel more in control of their own lives	Normal sense of being in control of their own lives
Greater self-confidence when it comes to making consumer decisions	Normal range of self-confidence when it comes to making consumer decisions
Less concern that they will make a mistake when buying something	Some concern that they will make a mistake when buying something
Especially knowledgeable and alert consumers	Low to average consumer capabilities
"Selectively innovative"	They are not innovative
Seek new experiences and personal challenges	Seek stability and secure routine
Less interested in accumulating possessions	Normal range of interest in accumulating possessions
Higher measured life satisfaction	Lower measured life satisfaction
Less likely to want live their lives over differently	Have some regrets
Perceive themselves to be healthier than most people of their age	Perceive themselves to be normal health for their age
Feel financially more secure	Somewhat concerned about financial security

TABLE 2: Comparison of New- Age and Traditional Elderly (Schiffman & Sherman 1991, 192.)

3.3 Marketing to mature customers

Many companies view demographic changes as a opportunity to target evolving market and to reposition or develop new products. Most of the decisions and targeting strategies are based the notion that people respond differently to company offerings according to

their age. Diverse research has shown that age is usually not a major factor in determining older consumer´s responses to marketing activities. (Moschis 1991, 34.)

The products or services created specifically for the "senior market" be refused by the said market. It has been also said that the mature market do not want to try new products or services. The mature customer will definitely try new products or services, but they will try them for different reasons than younger market. Mature customers are not going to try something because it is the "thing to do", they are going to try something if it can meet a personal, specific need they have. The mature customers want to be in control. They feel that as if they want to retake control of their lives, given the growing governmental bureaucracies. The mature customer is selective and very discerning. Above all else, they are very skeptical. In mature market, actions counts more than words. (Leventhal 1997, 279.)

Anil Mathur, Elaine Sherman and Leon G.Shiffman (1998) founded that identifying and targeting the new-age elderly based on their value orientations might be the best choice in the long run. As life expectancy increases, people become more conscious of their health, and better resources are available, more people are likely to have values consistent with new-age elderly. That is why it is important that these groups are targeted using appeals consistent with the new-age elderly orientations rather than traditional age-based appeals. (Mathur et.al, 1998, 274.)

Marketing studies have identified marketplace needs and preferences that are especially important to elderly customers. Generally, customer dissatisfaction occurs when marketplace expectations are not met. Julie Johnson-Hillary, Jikeyong Kang andWen-Jan Tuan (1997) researched elderly customers´ satisfaction levels and differences and founded that the elderly customers are quite satisfied with retail markets. However, they add that elderly customers today have relatively low expectations of today´ s retail market and feel "satisfied" only in comparison to their expectations. (Johnson – Hillary et al. 1997, 133, 136.)

The mature customers enjoy the shopping experience and the interpersonal interaction it provides. The elderly customers are not likely to change their patronage patterns to try something different. For example, they tend to continue shopping with a retailer with whom they feel comfortable. Price and price-related aspects are of lesser importance to them, they are not restricted monetarily. (Lumpkin et.al, 1982, 82, 86.)

When marketing to mature customers, age is not the most important factor to emphasize. Therefore, developing new products or services which appeal to a wider group of consumers has merit. All mature customers are not similar. The longer people live, the more different they actually become. Different mature customers have different needs, and that is why they may compose different segments. (Kennett et.al 1995, 69.)

Mature customers are especially knowledgeable and alert consumers. They are less taken in by minor product variations or unnecessary gimmicks than younger less experienced consumers. Older consumer can be characterized as "selectively innovative". Available research supporting this view indicates that the elderly will accept a practice, or buy something new, when they feel that they will benefit from making the purchase. (Schiffman et.al,1991, 191.)

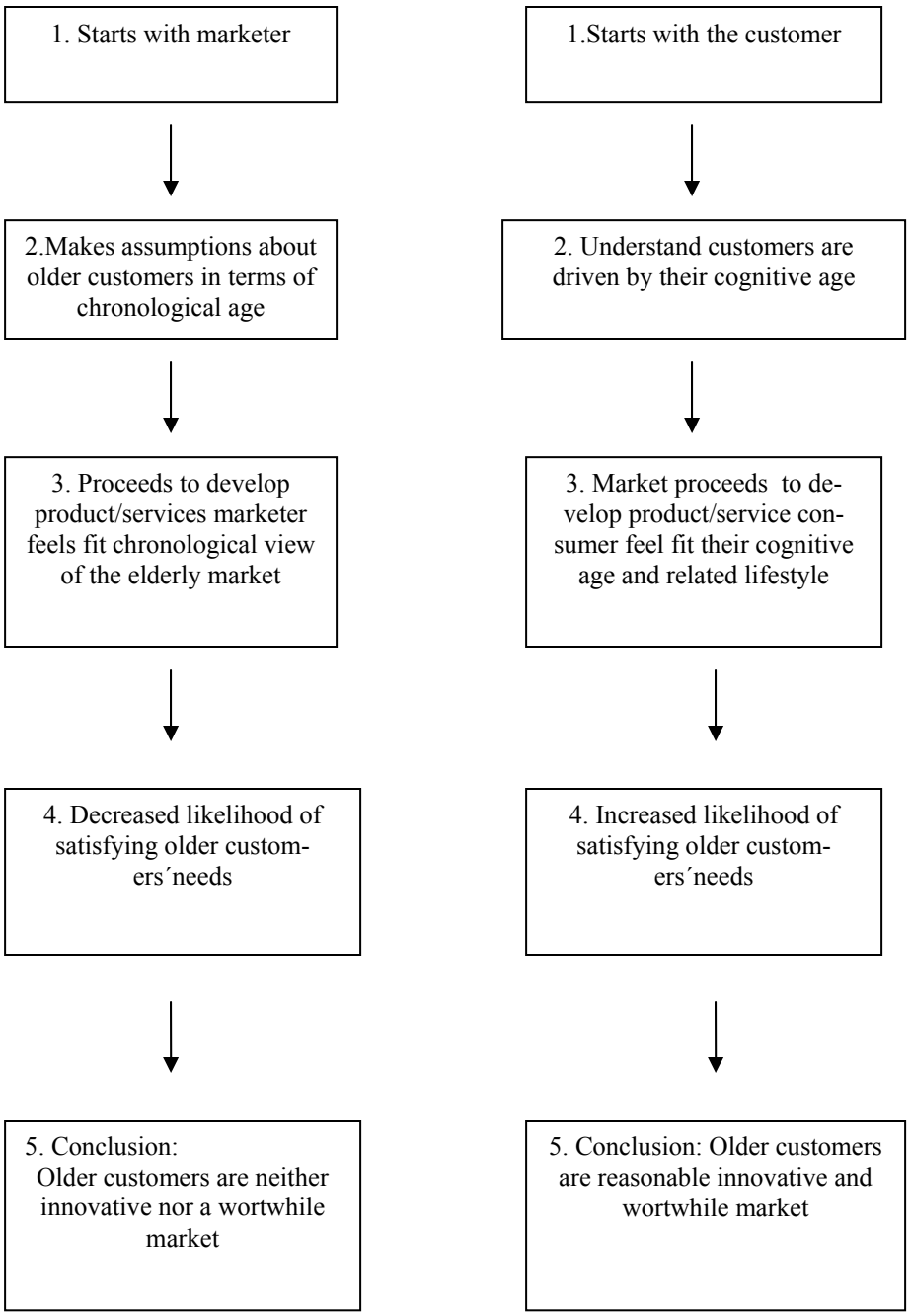

FIGURE 1: Two models of the mature market: marketer versus consumer perspectives (Shiffman&Sherman 1991, 193.)

3.4 Mature customers and technology

Older people are known to be as interested as any other group, if they are properly informed. It is useful to distinguish the market for mainstream products and services from that for more specific products and services. (www.seniorwatch.de/swa/desxbackground.html) They want to find products and services on the market which they regard as appealing and useful and they will wish to fully participate in society as independent citizens. It has been proven that the involment of elderly people in the product development process creates extensive added value, besides being simple and cheap in its execution. (Bosma et al. 2000,1,3)

Older people are very likely to be interested in the same information topics as other people, but also in information that has specific relevance for their particular life situation(www.seniorwatch.de/swa/resxtechnology.html) Technology can play an important role of solution of social problems. A better use of technological options in products attractive and useful for ageing consumers can contribute to an improvement of their quality of life and easier social intergration . (Bosma ym.2000,5) Telecommunications offers an enormous potential for older people with communications barriers, which can be broken down by means of the adequate technological devices. Telecommunications have an impact on this group`s intergration into an interrelated society. To older people the telephone remains very important to ensure regular social contacts with relatives and friends. The telecommunications network is proving to be a key element in the development of the overall information highway. (Gilligan et al.199812)

It is essential that mature customers are involved in any consumer-centered adoption of technologies whenever they are used in products and services. If not, the outcome will be that the products and services will not meet the wishes and requirements of seniors who will not accept them. When products do not consider the possibilities and limitations of the ageing, they will be useless for mature customers. A large market potential will then be left barren. (Bosma et al.2000,5)

There are two conceptions of the vision of technology and ageing:

1) a consumerist vision, in which older people are identified as a strongly emerging market, whose specifity and purchasing behaviour need to be better understood.
2) A solidarity-based vision, which are identifying older people as an increasingly fragile social group

The first vision is very recent in France. The second vision has been the last 20 the most influential in terms of the structuring of service supply, notably due to the influence of the public authorities. (Gilligan et al.1998,10)

The economically inactive older people who do not have much contact with children and younger generations are the most difficult group to reach and interest in new technologies: the 65+ are least aware of the benefits of new technology. The fear of technology intensifies with age also, and plays a strong part. Further, many older people refuse to get in contact with new services because they claim that they contain ethically dubious information, like pornography.(Gilligan et al.1998,18,34)

The cost factor is recognized as a major barrier for older people in accessing new information and communication technologies. Before using a new application older people will have to be well informed about the benefits that they will derive from it. On the other hand, this consumer group could afford to buy new equipment, but are often hesitant about doing so. Therefore it is not only the cost of the equipment but also a lack of information when purchasing new equipment. (Gilligan et al..1998,25)

Mature customers need to be well informed about the advantages of new services for example an Internet connection. Then if the mature customer recognise the benefits and learn to value the services, then the price that has to be paid for access becomes comparatively low. (Gilligan et al. 1998,25) Once technology reaches maturity and its benefits are well understood, mature customers are as likely to use it as younger people. The key to the successful introduction of a technology for older adults is to make sure it is affordable, easy to use and delivers significant benefits. (Adler 2002, 9.)

The age of 70 is a turning point of having an interest in ICT. Consumers over 70 have less interest, they have lower education and lower income than younger. Still there is a potential interest in multimedia and its applications. Older women have less interest in technology in comparison in their male counterparts. Older women tend to have a lower educational level and lower level of financial resources. Older men, instead, have had more opportunities and more support in getting to know about new technologies whereas women are less confident and more sceptical towards it. Nevertheless, it is worth noticing that women are more prepared to learn from others such as through a course. .(Gilligan et al. 1998 33-34)

Mature customers seem to be interested in new possibilities for communications, education , leisure activities and home shopping. On the other hand older people feel a certain apprehension in relation to the new technologies, but they know how to make use of equipment corresponding to their real needs, like television and remote controls.(Gilligan et. al 199831-33)

The steady expansion of communications technologies has been major factor in keeping people connected in an mobile, geographically diverse society. E-mail and instant messaging has provided an entirely new option for people to communicate each other. And eventually, the distinction between a wired and wireless phone will disappear, and each individual will be reachable through a single number no matter where she or he is. These capabilities will appeal to older consumer, for they want to share they live with each other, across distance and across generations. Mature customer gain numerous advantages of broadband applications: Among the key benefits are enhancing communications with family and friends, expanding opportunities for lifelong learning, improving the delivery of health care services, supporting independent living and creating new options for entertainment. (Adler 2002, 10-16)

One of the most important and innovative benefits of broadband networks will be to enable and older adults to live independently by supporting their daily activities and keeping them closely connected to the outside world. The integration of computing and com-

munications technologies enhances the ability of ageing people to age in place. Older adults currently spend more time watching television than any other age group other than children. Options for interactive entertainment will expand. There will be opportunities to develop new types of content that appeal to elderly audience. If properly designed, this type of content also helps provide valuable stimulation that can help ageing people remain mentally active. (Adler 2002, 18.)

When marketers are trying to introduce technological products to mature customers they have to overcome some extended clichés: "older people reject technology" "technological devices are too difficult to be used by older people". In fact, there are no evidence that older people dislike the use of novel technology in a larger measure than other people do. The rejection is frequently due to low quality of interface. Automatic teller machines are a good example. In addition there are many studies that show that adequately trained older people are in general able to use technology. Designers who have had contacts with older people are surprised of the rapid adaptation and the level of efficiency that these users are able to reach in short time when the device adequately fulfills their needs.(Abascal et al 2001,96)

Mature customers expect from mobile communications fully reliable personal communications and services to improve, as much as possible, their safety and quality of life. These expectations are not so differ from the expectations of younger user. It is important to take into consideration elderly users needs through the whole design process. (Abascal&Civit 2001,93.) Mobile phone can be the most natural element to communicate with their friends and relatives or to contact emergency services in case of need.(Abascal et al 2001,94)

According to Abascal and Civic (2001), the requirements that mobile communication systems for older people should met are related to one or more of the following areas on impact. These areas are personal communication, security, social integration and autonomy. For elderly people mobile technology enhances their chances of personal commu-

nication avoiding the previous restrictions to some places and some times in the day. (Abascal&Civit 2001,96.)

Many older people have motor restrictions that can led them to potentially risk situations that increase when they try to carry on an independent way of life. (Abascal&Civit 2001,96) Mobile communication could help them feel much secure about themselves. Also in situations of illness and home accidents require a quick and reliable communication channel to obtain urgent help. Mobile telephones are a way to reach services that contribute to socialization and the combination of personal communication, security and access to integrative services gives to older people more opportunities to carry out an independent way of life. (Abascal&Civit 2001,96)

Elderly people can experiment problems to use mobile phones: the use of many mobile terminals is extremely difficult and many ageing users do not feel able to handle them. There exist terminals with large displays, that keep most common functions easy to use, but there is still great room for improvements. If the older people have also disabilities they can experiment more difficulties to use mobile phones:Hard of hearing users can experiment difficult problems when they are using GSM mobile phones or DECT wireless terminals : these effects can be minimized if they are considered in the design phase of both the phone and the hearing aid. (Abascal&Civit 2001,94)

3.4.1 Technology adoption and mature customer

Consumer innovators can be defined as the relatively small groups of consumers who are the earliest purchasers of a new product. This definition contains one problem: the concept “earliest” is a relative term. Sociologists have solved this problem by defining the innovators as the first 2, 5 percent of the social system to adopt an innovation. In many marketing diffusion studies, the definition of consumer innovator has been derived from the status of the new product under estimation. Other research have defined innovators in terms of their innovativeness, which means their purchase of some minimum number of

new products. Consumer innovators are likely than noninnovators to seek information concerning their specific interest from a variety of informal and mass media sources. They are also more likely to give greater deliberation to the purchase of new products or services in there area of interests than noninnovators. (Schiffmanet. al 2000, 427.)

The innovator is an opinion leader. When innovators are enthusiastic about new product and encourage others to try it, the product is likely to receive broader and quicker acceptance. When consumer innovators are dissatisfied with a new product and discourage other from trying it, its acceptance will be severely limited, and it may die a quick death. (Schiffman et.al 2000, 427.)

The innovation-decision has five main steps. The first step is knowledge, it occurs when an individual engages is exposed to the innovation´s existence and gains some understanding how it functions. In the second phase of process, an individual forms an attitude toward to the innovation. The third step can be called decision. In this phase an individual engages in activities that lead to choice to adopt or reject the innovation. In the next step, implementation, occurs when an individual puts an innovation in use. Last step is called confirmation. It occurs when an individual seeks reinforcement of an innovation decision that has already been made, but an individual may reverse this previous decision if exposed to conflicting messages about the innovation. (Rogers 1983, 20-21.)

Technological innovation creates one kind of uncertainty in the minds of potential adopters as well as representing an opportunity for reduced uncertainty in another sense. The innovation –decision process is essentially an information-seeking and information-processing activity in which the individual is motivated to reduce uncertainty about the advantages and disadvantages of the innovation. (Rogers 1983,13.)

It is credible that aging consumers may be among the first purchasers for certain products, brands and services. If companies are able to identify the social, economic and psychological characteristics of early adopters, they should be better to tailor the product development and marketing mix to meet their requirements. Clearly people the age 50, 60

or even 70 do not constitute a homogeneous mass and identifying the characteristics of more innovative aging consumer is an important opportunity for marketers. (Szmigin et al. 2000, 508-509)

Older people do adopt innovations. They view technology developments such as Internet as a route to education and leisure pursuits. Aging people will generally not just buy things for their newness they are likely to be more critical and make comparisons with competitive offerings. Marketers must distinguish between the active older consumers whose requirements are similar to when they were younger and those "old-old" who have become frail and hence their shopping habits inevitably have become constrained.(Szmigin et. al 2000, 511)

Szmigin and Carrigan founded also that feeling younger than your chronological age did not provide an appropriate indication of potential innovative behavior , both the cognitively younger and older were more and less innovative than the mean. There are young innovators and old innovators and this goes for both chronological and cognitive age.(Szmigin et al. 2000, 519-520)

Valarie A Zeithaml and Mary C.Gilly studied the acceptance of retailing technologies among elderly consumers. The elderly were founded to accept some innovations passively, accept some enthusiastically and reject others. (Zeithaml&Gilly 1987, 49) They posted a questionnaire and cover letter to a sample of 2500 elderly respondents (aged 65+), and got response rate of 20 percent. A second sample consisted of 2500 respondents between ages of 18 and 64 and the response rate for this sample was 25 percent. (Zeithaml et. al 1987, 53)

Elderly consumers were more to likely than younger consumers to prefer the customary way of conducting transactions and to enjoy the personal interaction with employees. The elderly were also more likely to see no need for the service. The adoption is passive rather than deliberate, and Zeithaml and Gilly founded also that adoption of innovation by the elderly is appears to be a deliberate choice based on offering of a superior way to

meet their needs. This finding suggests that elderly are not resistant to change when superior benefits are provided. (Zeithaml et.al. 1987, 57)

For the elderly consumers, education has the greatest impact on awareness of the innovations. Education exhibited a smaller, but still significant, relationship with trial and adoption . Income is related to awareness and trial but not to adoption. Locus of control was founded to be negatively related to awareness, trial, and adoption for the elderly. Respondents who exhibited an external locus of control were less likely to be aware of innovations, to try them and to adopt them. (Zeithaml et. al 1987, 58)

Marital status, access to transportation and amount of family contact exhibited no relationship to awareness, trial or adoption. According to Zeithaml and Gilly (1987) elderly consumers in apartments were more likely to have adopted the technologies than were elderly who lived in houses. Education and income appear to be important characteristics relating to awareness, trial and adoption. Stronger relationships exists between education and trial and between income and adoption for the nonelderly group. Respondents who had tried all three innovations had higher incomes, greater family contact, lived multiunit dwellings and exhibited greater exposure to print media than elderly respondents who tried none. For the elderly sample, education, income, locus of control and print media exposure were most related trial of the three innovations. (Zeithaml et. al ,59 1987)

The demographic characteristics had been predicted to be associated with acceptance of new technologies. Kerschner and Chelsvig (1981) and Rogers (1983) founded income and education exhibited relationships to awareness, trial and adoption of retailing innovations for elderly consumers. However, Zeithaml and Gilly founded that this relationship were stronger for the nonelderly sample. Furthermore, the discriminant analysis revealed that education did not contribute significantly no differentiating resisters and accepters among the elderly, when other variables were considered. Income appears to be the more important demographic variable in predicting how the elderly consumer will react to new technologies. Income is critical even thought the technologies cost virtually nothing to adopt. (Zeithaml&Gilly 1987, 65)

Married consumers are not more likely to be aware of, try and adopt new technologies. Elderly consumers who are open to try new technologies include those higher in income, those living in multiunit dwellings, and those who are exposed to print media. (Zeithaml&Gillly 1987, 65-66.)

McMellon, Schiffman and Sherman (1997) founded that there are two different kinds of aging people who are interested in technology, especially on-line activities: the technology lovers and the technology users. Technology-lovers seem to be individuals´ whose life long fascination with technology has led them to readily adopt computers, whereas the technology-users are more pragmatic individuals, who accept technology and consider computers just another tool. The tech-lovers are innovators and more in control of their lives, they could be also a little healthier and happier. They appear to have a higher a need for cognition than the tech-users and have a stronger need to communicate. Need to communicate is not driven by loneliness but appears to be related to their need for cognition and may be more a function of a sheer need to communicate like-minded or to pass on information to the next generation. Tech-lovers had been involved with computers for many years, thus when on-line services became available, they gravitated to them easily. Tech-lovers are going somewhere with computers expanding their lives (McMellon et al.1997)

The tech-users are generally in control of their lives "as far as any of us are". They do not feel younger and they appear to have a lower need for cognition and communication. Tech-users seem less impressed with computers, "It helps me type better". Tech-users appear to have had a more reluctant involvement and they seem to be coming from somewhere with computers aiding their current situation.(McMellon et al1997)

Organizations interested in communicating with the elderly about innovations should contact them directly rather than rely on publicity on word-of-mouth. Elderly consumers do accept change when the technology meets their needs and it effectively communicated.(Gilly et al. 1985,357.)

According to Lunsford and Burnett (1992), there are five barriers to be overcome before mature customers adopt innovation. The first barrier is product usage. Innovations may fail to be adopted by the elderly because use of the new product is incompatible with the physiological abilities. Because as people age, there are reductions in vision capacity, touch sensitivity and muscle strength. (Lunsford et al. 1992,55.)

The second barrier is connected to values. Aged people adopt innovations only if they perceive a clear benefit in the new product. Since the needs of the age groups differ, so do the perceived values of product innovations. For Example,new technologies have made possible many innovations that save time – elderly have time, time saving is not important- they do not adopt innovations. Older people have adopted the innovation of electronic funds transfer banking : it is safe and dependable. (Lunsford et al.1992,56.)

The third barrier is self image. According to research, the elderly market is segmented by self-image. New age elderly are supposed to have a cognitive age younger than their chronological age and their self-image is of someone younger and healthier than they may actually be. This group is more likely to try new products than the elderly in general. New products with great potential to improve the lives of elderly have been rejected because of they were products for old people. (Lunsford et al. 1992,56.)

The fourth barriers is enduring cultural values. The behavior of elderly consumers is a product of their enduring values, which are formed over a lifetime of experiences. This generation values a hard work, loyalty and saving. These consumers will be very critical in evaluating new innovations and be hesitant to spend their money self-indulgently. Elderly consumers describe themselves as brand loyal. Once they have made their choices, they remain loyal to the brands that perform as expected. (Lunsford et al.1992,56-57.)

The last barrier to overcome is risks. There are three perceived risks influencing in the evaluation of a product innovation: physical risk, economic risk and functional risk. The first risk, physical one, refers to the concern that the product may result in harm to life or

limb. This risk exists in the elderly consumer´ s evaluation of drugs and other health products. The second risk, economic risk, becomes a concern if the consumer perceives the product to be a significant financial investment. The third one, functional risk, is operating when the elderly fear the product will not perform as decisions. (Lunsford et al.1992,57.)

3.4.2 Technology Acceptance Models

The previous research has formed several models for to describe technology acceptance. Maybe the most used model is called TAM, technology acceptance model. Technology acceptance model predicts voluntary information technology usage and intentions. (Mathieson et.al.2001, 108.) Fred D. Davis introduced Technology Acceptance Model, TAM, in 1986. The model is an adoption of Theory of Reasoned Action, TRA. According to TRA, a person´s performance of a specified behavior is determined by his or her behavioral intention (BI) to perform the behavior and BI is jointly determined by the person`s attitude (A) and subjective norm (SN) concerning the behavior in question, with relative weights typically estimated by regression: BI = A + SN . (Davis et al.1989,982)

The goal of the TAM-model is to provide an explanation of the determinants of computer acceptance in general, capable of explaining user behavior across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified. A key purpose of TAM is to provide a basis for tracing the impact of external factors on internal beliefs, attitudes and intentions. The model was formulated in an attempt to achieve these goals by identifying a small number of fundamental variables suggested by previous research dealing with the cognitive and affective determinants of computer acceptance, and using Theory of Reasoned Action as a theoretical background for modeling the theoretical relationships among these variables.(Davis et al. 1989, 985)

TAM posits that two particular beliefs, perceived usefulness and perceived ease of use are primary relevance for information technology acceptance behaviors. Perceived use-

fulness is defined as the prospective user´s subjective probability that using a specific application will increase his or her (job) performance within an organizational context. Perceived ease of use refers to the degree to which the prospective user expects the target system to be free of effort. Several studies have founded variables similar to these to be linked to attitudes and usage. Similar to Theory of Reasoned Action, TAM postulates that computer usage is determined by behavioral intention to use, but differs in that behavioral intention to use is viewed as being jointly determined by the person´ s attitude toward using the system and perceived usefulness with relative weights estimated by regression: behavioral intention = attitude toward using the system + perceived usefulness. (Davis et. al 1989, 985.)

Theory of planned behavior is adapted also in explaining the technology acceptance. A central factor in the theory of planned behavior is the individual´ s intention to perform a given behavior. Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior. As a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance. (Ajzen 1991,181).

Perceived behavioral control refers to people´ s perception of the ease of use or difficulty of performing the behavior of interest. Perceived behavioral control plays an important part of the theory of planned behavior. Perceived behavioral control, together with behavioral intention can be used directly to predict behavioral achievement. According to Ajzen, two rationales can be used directly to predict behavioral achievement. First holding intention constant, the effort expended to bring a course of behavior to a successful conclusion is likely to increase with perceived behavioral control. The second reason for expecting a direct link between perceived behavioral control can often be used as a substitute for a measure of actual control. Perceived behavioral control may not be particularly realistic when a person has relatively little information about the behavior, when requirements or available resources have changed or when new and unfamiliar elements have entered into situation. (Ajzen 1991, 183-184.)

The theory of planned behavior postulates three conceptually independent determinants of intention. The first is the attitude toward the behavior and it refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question. The second predictor is called subjective norm. It refers to the perceived social pressure to perform or not perform the behavior. The third antecented of intention is the degree of perceived behavioral control. As a general rule the more favorable the attitude and subjective norm with respect to a behavior , and the greater the perceived behavioral control, the stronger should be an individual´ s intention to perform the behavior under consideration. The relative importance of attitude, subjective norm and perceived behavioral control in the prediction of intention is expected to vary across behaviors and situation. (Ajzen 1991, 188.)

Michael G Morris and Viswanath Venkatesh (2000) have developed model based to theory of planned behavior , which studies the age´ s influence on technology usage have build a special model which is building on theory of planned behavior outlining the role of age as a key factor influencing usage. They come to decision that there are clear differences with age in the importance of various factors in technology usage and adoption. (Morris et. al 200, 378). According to Morris et.al (2000) there are clear differences with age in the importance of various factors in technology adoption and usage. They founded that older weighted more the importance of subjective norm and perceived behavior more strongly than younger in determining usage of new technology in the short term. (Morris et al.2000, 392)

4 THEORETICAL FRAMEWORK

As mentioned in chapter xx , the questionnaire was based on mature customers´ interviews conducted in February 2003 and April 2003. All the interviewees were also 50-75 years old Finnish people. In addition, while doing interviews, also some observation was made about their mobile phone and mobile service usage. The themes in interviews were related to mobile service and their usage, mobile phones and using them and also to general perceptions about Information technology. The interviews were great help in forming the research question and framework about this subject. These interviews indicated that before internet, mobile phones and mobile services are related. The figure 2 describes it :

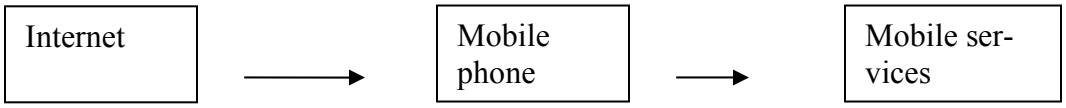

FIGURE 2: Hypothesis 1.

Based of this assumption it, the first hypothesis of this study can be formed:

"The perceptions and usage of internet affect on and the motives for mobile phone usage have an effect on mobile service usage among mature customers"

The chapter 3 introduced the literature related to the field of this thesis. The theoretical framework of this study is consisting of previous research of the consumer behavior of mature customers, their technology acceptance and previous technology acceptance models. This thesis can be defined as quantitative study. The objective of quantitative study is to developed techniques to identify concepts and relationships, collect data and test hypothesis which can be drawn from theory (Rigby 1964, 82)

The literature indicates that also demographics, general technology perceptions, innovativeness may affect the mobile service usage among mature customers. Based by the literature the second and third hypothesis can be formed:

"The general technology perceptions, demographics, innovativeness and self-image affect mobile service usage among mature customers".

"The five key values motivate consumption of mature customers´"

The framework of this thesis is based on previous research, literature and conducted interviews. The hypothesis based on interviews and hypothesis based on literature and previous researches are forming together the first hypothesis of this study, which is presented in figure 5:

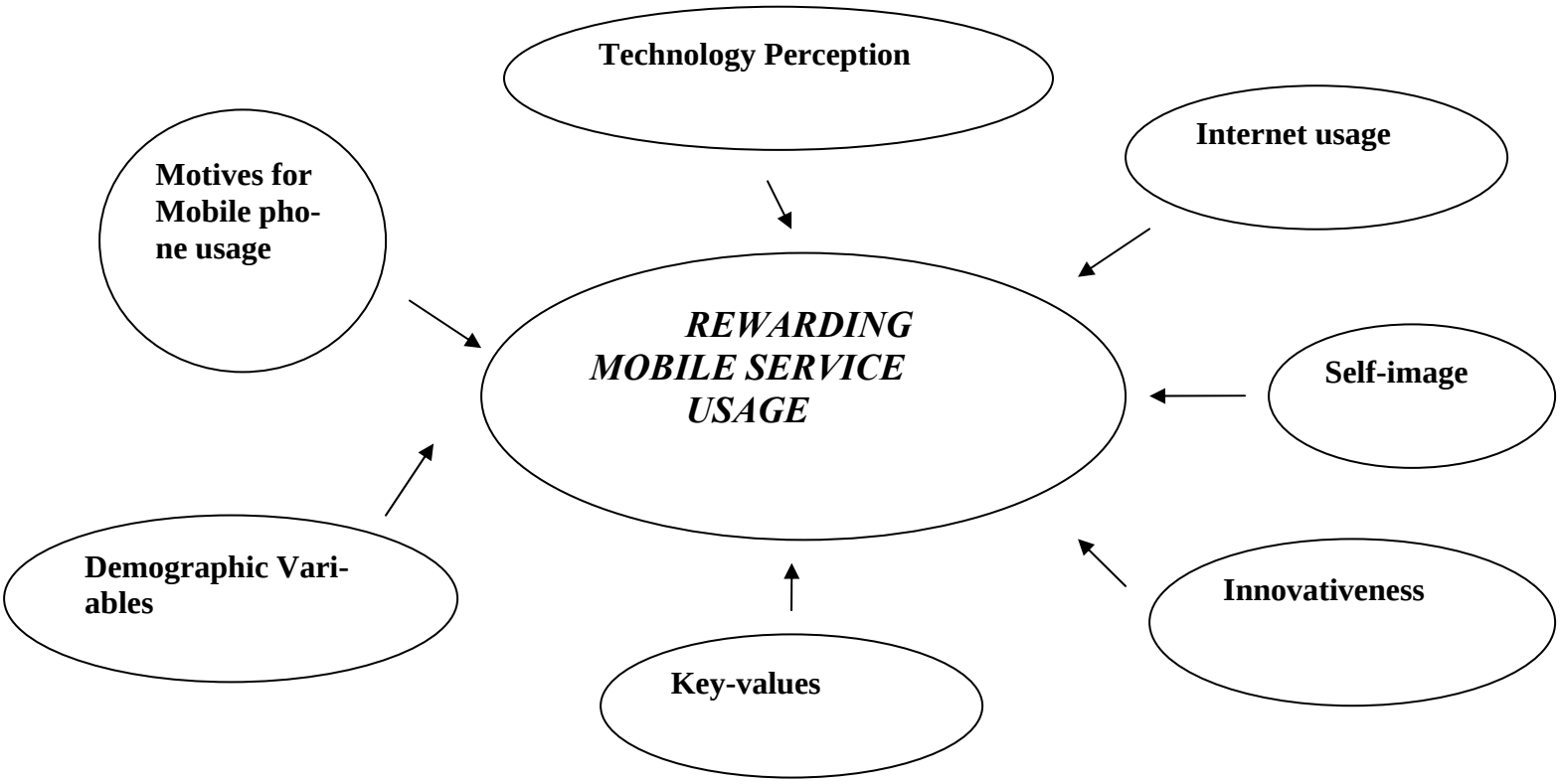

FIGURE 3 : Theoretical framework of the study; hypothesis 1 and 2

Chi-square test and correlation are the main tools which are used in forming this model.

5 REVIEW OF THE RESULTS

5.1 Demographic profile of respondents

The questionnaire contained 11 questions which handled demographic factors. As mentioned in chapter, 3000 questionnaires were posted and totally 1515 responses were received. 15 responses were blank or discreet and they were rejected, and that made the final response rate of 50 percent. As mentioned earlier, the sample consisted of 1500 50-64 years old Finnish people and of 1500 65-75 years old people. From age group 50-64 years old 767 responses were received and that made the response rate of 51.1 percent. The response rate among older age group, 65-75 years old was a bit lower, 46.8 percent. The total amount of responses among 65-75 was 702. Among all respondents there were 31 persons who did not tell their age. These 31 was eliminated when the data was divided according to the age group of the respondents´.

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Age group	**f**	**%**
50-64	767	51.1
65-75	702	46.8
No answer	31	2.1

TABLE 2: Response rate

The majority of respondents were women. In younger age group, women formed 53.6 percent of all age group, but in the older age group the difference between genders was even. Among 65-75 years old respondents there were women 50.4 percent and men 49 percent. As table xx shows, only ten responses more were received from female respondents in older age group. Majority of respondents were married, their proportion of all 50-64 years old respondents were 67.8 and among 65-75 years old 63.2 percent. Among younger age group there were more cohabitants than among 65-75 years old. Also per-

centages of divorced and single were higher among 50-64 years old than among 65-75 years old. On the other hand, among 65-75 years old respondents there were more widowed than among 50-64 years old.

		50-64			65-75	
		f	%		f	%
Gender						
Female		408	53.6		354	50.4
Male		356	46.4		344	49.0
No answer		3	0.4		4	0.6
Total		767	100		702	100
Marital Status						
Married	520	67.8		444	63.2	
Cohabit	84	11.0		30	4.3	
Single		50	6.5		42	6.0
Widow		30	3.9		115	16.4
Divorced		81	10.6		69	9.8
No answer		2	0.3		26	3.7
Total		767	100		702	100

TABLE 3: Gender and marital status

Although elementary school was the most typical educational background among both respondent groups, the younger respondents seem to have a higher educational background than the older, 65-75 years old respondents. In both groups, vocational school was second common education background. The number of high-school graduates was bigger among 50-64 years old than among 65-75 years old. The difference is clear compared to older respondents, among 65-75 years old only 1.6 percent was high school graduates. Younger respondents had also more university degrees than older ones.

		50-64			65-75	
		f	%		f	%
Education						
Elementary school		230	30		323	46.0
Vocational school		176	22.9		123	17.5
Trade school		101	13.2		64	9.1
Technology school		73	9.5		60	8.5
High school graduate		56	7.3		11	1.6
University degree	102	13.3		78	11.1	
No answer		29	3.8		43	6.1
Total		767	100		702	100

TABLE 4: Educational background among respondents.

Almost all older, 65-75 years old, respondents were retired. Only one percent of them said that they are still in working life. The situation was different among 50-64 years old, 30 percent of them were retired. The respondents were asked to tell their present profession and if they were retired, they were asked to tell the profession which they have latest before retiring. According to table xx, the respondents groups were quite similar by their professional background. In both respondents groups, worker was the most common profession. Also the second common profession, clerical worker, was the same among 50-64 years old respondents as among 65-75 years old. There was difference between the groups considering the third common profession. Among younger respondents the third common profession was civil servant, but among older age group there were two professions which were third popular professions, civil servant and manager. It is interesting that among 65-75 years old there were more managers than among 50-64, because as table xx told, the 65-75 years old had a lower educational background.

	50-64		**65-75**	
Are you retired **?**	**f**	**%**	**f**	**%**
Yes	232	30.2	659	93.9
No	508	66.2	7	1.0
No answer	27	3.5	36	5.1
Total	767	100	702	100

TABLE 5 : Retirees

	50-64		**65-75**	
Profession	**f**	**%**	**f**	**%**
Farmer	33	4.2	78	11.1
Worker	212	27.6	208	29.6
Clerical worker	188	24.5	138	19.7
Civil servant	70	9.1	67	9.5
Entrepreneur	69	9.0	49	7.0
Manager	58	7.6	67	9.5
Housewife	7	0.9	21	3.0
Not working	20	2.6	10	1.4
Other	16	2.1	22	3.1
No answer	94	12.3	42	6.0
Total	767	100	702	100

TABLE 6: Profession

Respondents` income level was studied by asking to tell their monthly income. It was thought that especially for older ones the monthly income level was easier to remember and tell. The scale for monthly income was wide, because it was probable that the whole

sample contain both low-income retired and high-income mangers. The younger respondents´ monthly income was divided even than older respondents´.

Among 65-75 the most respondents´ income level was between 400-1600 Euros, but among the younger respondents there were more difference. The most common income level among 50-64 years old was 1201-1600 Euros, and among 65-75 it was 801-1200 Euros. Those, who earned more than 5601 Euros per month, were 1.6 percent of 50-64 years old respondents and among 65-75 1.0 percent of respondents.

Monthly income/€		**50-64**			**65-75**	
		f	**%**		**f**	**%**
400-800	115	15		194	27.6	
801-1200		110	14.3		205	29.2
1201-1600		142	18.5		100	14.2
1601-2000		101	13.2		57	8.1
2001-2400		77	10		26	3.7
2401-2800		47	6.1		14	2.0
2801-3200		40	5.2		12	1.7
3201-3600		33	4.3		5	0.7
3601-4500		27	3.5		8	1.1
4501-5600		13	1.7		6	0.9
5601 and more		12	1.6		7	1.0
No answer		130	8.7		68	9.7
Total		767	100		702	100

TABLE 7: Monthly income

The respondents´ subjective age was also measured. The younger respondents found themselves young, middle-aged, aging or old. The majority, 54.6 percent of all younger respondents, were the in the opinion that the best word to describe them is "middle-aged". But big proportion of these respondents founded themselves as an aging, 43 percent of 50-64 years old respondents said that "an aging" is the adjective which describes them best. None of younger respondents consider themselves to be old and only one percent were in the opinion that they are young. In general, the older respondents found "aging" or "old" to be the best word to describe them. None of older respondents thought himself /herself as young. As the table 8 tells, the great majority of them, 68.8 percent, thought themselves to be aging.

	50-64		**65-75**	
I´m …	**f**	**%**	**f**	**%**
Young	11	1.4		
Middle-aged	419	54.6	49	7.0
Aging	331	43.1	483	68.8
Old	2	0.3	158	22.5

No answer		4	0.5	12	1.7
Total	767	100	702	100	

TABLE 8: Subjective age

According to chronological age, the respondents were 50-75 years old, but according to cognitive age, they were 43-84 years old. The mean-cognitive age among all respondents was 56.09 years (Std.dev. 6.800). According their cognitive age respondents were divided into four age groups, and as the table shows, the majority of all respondents belonged to cognitive age group 54-64 years. Cognitive age was counted by using Barak´ s (1987) cognitive age measure. The cognitive age score was computed by counting the average of four age dimesion score: (feel/age + look/age+do/age+interest/age) /4. If the respondent did not answer to every dimension, the respondent was dropped out from data analysis. The Cronbach´s alpha was 0.7868.

Among the younger respondents cognitive age varied from 43 to 83 years. The mean cognitive age was 56,4 years (Std.dev. 7,057), which is quite close their actual chronological age. Among (65-75 years old) older respondents' cognitive age varied from 48 years to 84 years and the mean cognitive age was 55, 9 years (Std.dev 6,526). It is worth noticing that the lowest cognitive age in this older group was higher (48 years) than in younger group (43 years), but the mean-cognitive age was lower (55,9 years) than among the younger group (56,4 years).According to these result it can be said that 50-64 years old consider person who is 55 years old as middle-aged, but the older, 65-75 years old, consider the 55 years old person being old. The Cronbach`s alpha for cognitive age meas

	50-64		**65-75**	
Cognitive age group	**f**	**%**	**f**	**%**
43-47	3	0.4		
48-58	586	76.4	550	78.3
59-69	140	18.3	130	18.5
70-80	25	3.3	18	2.6
80 and over	10	1.3	3	0.4
No answer	3	0.4	1	0.1
Total	767	100	702	100

TABLE 9: Cognitive age-groups

The majority of all respondents have a mobile phone at their use. Only 11.9 of 50-64 years old respondents did not have a mobile phone at their use. Among older respondents the percent of non-users is higher, 28.3 percent of all respondents age of 65-75 years told that they do not have a mobile phone at their use. As the table xx shows, it is more common among 65-75 years old than among 50-64 years old that they share them mobile phone with their spouse.

		50-64			**65-75**	
		f	**%**		**f**	**%**
MOBILE PHONE						
Do you have a mobile phone?						
Yes, my own		606	79		373	53.1
Yes, shared with spouse	69	9.0		115	16.4	
No		91	11.9		199	28.3
No answer		1	0.1		15	2.1
Total		767	100		702	100

TABLE 10: Do you have mobile phone?

Along with receiving and making calls mature customers use their mobile phone for text-messaging. In both respondent groups text-messaging is very popular. Among the younger respondents group a great majority, 93.5 percent of all said that they send and receive text-messages via their mobile phone. The percentage proportion was a bit smaller among older age group, among 65-75 years old 83.5 percent use text-messaging.

		50 -64			**65-75**	
		f	**%**		**f**	**%**
Do You use						
Text-messaging	558	93.5		279	83.8	
Picture messaging		121	21.8		21	12.8
Multimedia messaging	34	6.15		3	1.1	

TABLE 11 mobile phone usage

6 DISCUSSION

6.1 Demographics and self-image

In the chapter 5 the demographic profile of the respondents was described.As mentioned in the literature review in chapter 3, according to Zeithaml et.al (1987) and Gilligan et al (1998) age, education level and income have an effect on mature customers´ technology usage. In addition, Zeithaml et al, (1987) suggest that marital status plays also an important role in mature customers´ technology usage and Gilligan et al. (1998) have founded that technology usage varies between genders.

Conducted chi-square test shows (table 12) that education and income have a very significant effect on rewarding mobile service usage but the age` s effect is only almost significant p= .001). To know, how these variables affect the correlation coefficients were conducted. The Spearman´s rho shows, that there are strong positive and statistically significant correlation between rewarding mobile service usage and income level (r_s, = .204** p<0.001) but negative, statistically significant correlation between education and mobile service usage (r_s = -.148**, p<.001.) These correlations implicates that the higher monthly income level mature customer has the more likely he/she uses also mobile services, but the lower the mature customer´ s educational level is, the likely he/she uses mobile services. This may sound a little conflicting, but in Finland **i**t is usual that factory workers have better income level that those who have higher education. Also it is worth remembering that the sample consisted both of retirees and those who are still in working life.

Neither marital status nor gender has statistically significant effect on rewarding mobile service usage. According to the conducted chi-square test (table12) the p-value of marital status is .023 and p.value for gender is .044. Neither of these p-values can be considered as statistically significant and also correlations between gender and mobile service usage and marital status and mobile service usage are both statistically insignificant and weak.

Self-Image

Both cognitive age and subjective age are important parts in mature customers´ self-image. As the demographic profile in the chapter 5.1 indicates, there are differences between chronological age and cognitive age and chronological age and subjective age. These different age dimensions have also different effect on mobile service usage. Cognitive age does not affect statistically significant to rewarding mobile service usage (p=.360) and Pearson´ s correlation coefficient strengthens, that there is no significant relationship between cognitive age and rewarding mobile service usage ($_s$r= .-006 , p<0.05). There can be observed only a very weak negative correlation, which means that the lower the cognitive age is the more likely mature customer uses mobile services. The correlation level is too weak for to make any further conclusions.

However, the other dimension of age, the subjective age seems to have a statistically significant effect on rewarding mobile service usage. The Chi- square test` s p-value is very significant, p = .000 and the Pearson´s correlation coefficient is statistically significant it is quite weak (r= -.111, p>0.01). The correlation is weak, but the size of the data is so big, that also this kind of weak correlation can be seen as to be statistically significant (Tähtinen et al.1998, 101.) The negative correlation means, that the lower the subjective age is the more likely mature customer uses mobile services. So, it can be stated that those mature customers who define themselves as "young", "middle-aged" or "aging" are more likely to use mobile service than those who define themselves as "old".

The level of self-respect is also an important part of self-image. Using the seven point Likert scale from 3 (strongly agree) to -3 (strongly disagree) the respondents were asked, how the statement "I`m pleased with myself" hold true in their case. Among all respondents statement gained mean of 1.51 (std.dev 1.529) and altogether 27.9 percent of all strongly agreed the statement. This implies that mature customers have fairly good self-respect. However, there seem not be statistically very significant effect on rewarding mobile service usage. Still, according to the Chi-square test, the level of self-respect has almost statistically significant effect on rewarding mobile service usage (p> 0.05) rewarding mobile service usage. The correlation coefficient shows that there is a weak strong

relationship between the level of self-respect and rewarding mobile service usage (r_s=.040,p>0.05). The relationship is not statistically significant, although it implies that when mature customer has a strong self- respect, the more likely she/he uses mobile services.

Demographic variables:	x^2	**df.**	**Sig.**	r_s
Age	34,250	12	.001	-.090 ** (p<0.01)
Education	79, 389	30	.000	-.148** (p<0.01)
Income	140, 691	60	.000	.204 **(p<.001)
Marital status	39.785	24	.023	-.030(p>0.05)
Gender	12.950	6	.044	-.025(p>0.05)
Self – Image				
Self – respect	59, 706 36	.008	.040(p>0.05)	
Subjective age	69.927	18	.000	-.111** (p<.001)
Cognitive age	216.735 210	.360	.-006) (p>0.05)	

TABLE 12: Chi square test and correlation coefficient: demographic variables and self-image.

6.2 Innovativeness

The way to how kind of innovator mature customers´ considers themselves among their friends, has an effect on rewarding mobile service usage. Of all respondents only 5.3 percent said that compared to their friends, they are the first to try new product. It is interesting to notice, that among this 5.3 percent, the majority was women (51.9%) and by their subjective age "aging" (50.6%). Only 2.5 percent of these who considered themselves to be the first to try new product were "young" by their subjective age. By chronological age the majority of these first to try new product were 50-64 years old (53.2 %).

The respondents were also asked, how the statement "Compared to my friends, who are as old as I´m, I` m more interested in technology" and 5.6 percent said that they can totally agree with the statement. The majority of these were by their subjective age also "aging" and by their gender men. It is interesting, that by their chronological age, the majority were 50-64 years old (50.6) but 49.4 were 65-75 years old. This implies that older mature customers are also very interested in technology. On the other hand, 26.7 percent said, that they totally disagree the statement "compared to my friends, who are as old as I´m, I was among the last ones who bought mobile phone". The majority of this 26.7 per-

cent were 50-64 years old (58.1%), by their subjective age "Aging" and by gender men (52.9%)

The table 13 shows that the innovativeness affects on mobile services usage. All of these three statements have statistically very significant effect ($p<0.001$). The correlations show that the strongest relationship occurs between the statement "Compared to my same age friends, I`m the first to try new products" (r_s= .462**, $p<0.001$). This means, that those who consider themselves to be the first to try new products, will also use more likely than others to use mobile services.

	x^2	df.	Sig.	r_s	
Compared to my friends, who are as old as I´m, I`m the first to try new products	402.970	36	.000	462**	(p<.001)
Compared to my friends, who are as old as I´m , I was among the last who bought mobile phone	259.686	36	.000	-311**	(p<.001)
Compared to my friends who are as old as I´m, I´m more interested in technology	325.287	36	.000	.365 **	(p<.001)

TABLE 13: Innovativeness

6.3 General technology perceptions

In general, mature customers find technology usage quite easy and nice. Among the all respondents the statement "Technology usage is nice and easy" gained a mean of 0.11(std.dev. 1.943) among mature customers. The used scale was seven point Likert-scale from -3 (strongly disagree) to 3 (strongly agree).Chronological age, retirement status, gender and subjective age have impact on whether mature customer finds technology usage nice and easy or not. As ANOVA table (table 14) shows, there is significant variance ($p = .000$) between retired and non-retired mature customers. Those, who are not retired find technology usage easier and nicer than retired mature customers. Chronological age has also impact, but the variance is only almost significant ($p <0.05$). The younger

mature customers find technology usage easier and nicer than older, 65-75 years old mature customers.

The gender has also impact on how easy and nice mature customers find technology usage. Conducted ANOVA (table 14) shows that there is statistically very significant variance (p.=.000)between genders. Male mature customers find technology usage easier and nicer than female. The educational background offers one explanation for the difference, 16.2 percent of men have a technology school as their educational background whereas only 2.3 percent of all women have the same educational background. These men have been also before very interested in technology because they have chosen to have an education which is related to technology. Technology is and has been everyday issue for them, so it is natural that they consider technology easy and nice.

Although chronological age has some kind of effect on how easy and nice mature customer finds technology usage, the cognitive age does not have any significant effect (p = .966) on the usage. As the ANOVA table (table 14) shows, the variance between age groups based on cognitive age is not significant. The differences between means among cognitive age groups are rather small.

It is interesting that the way how mature customer defines herself/ himself seem to have effect on the perception of technology using being nice easy. The variance is statistically very significant (p.=.000). The closer look for the means of different groups indicates, that "younger" finds technology usage nice and easy. As the p-value indicates, the differences between means are clear. Those who defined themselves as "old" are finding technology usage less nice and easy than those who define themselves as "aging", "middle-aged" or "young". The difference between "young and "old" is big. The question was asked by using the seven point Likert scale from -3 (strongly disagree) to 3 (strongly agree). Among "old" it gained mean of -0.65 but among "young" the statement gained mean of 1.09.

As mentioned in the chapter 5.1. , none of the 65-75 years old mature customers defined themselves as "young". In the chapter xx it can be also noted that among respondents there were totally 469 mature customers that defined themselves as "middle-aged" and 89.5 percent of them belonged to age group 50-64 years. Additionally, it is worth remember that ANOVA table (table14) showed that there were only almost significant variance ($p<0.01$) between age groups in finding technology usage nice and easy. Based on these facts it can be stated, that subjective age is more important than chronological or cognitive age variable in finding technology usage nice and easy.

Marital status does not have a significant impact on whether mature customer finds technology usage nice and easy or not. The ANOVA table (table14) shows that the variance between different marital statuses is not big If the means are looked closer it could observed that those who are divorced, married or have a cohabitant find technology usage easier and nicer than those who are single or widow, although the variance is small.

	N	**Means**	**Mean square between groups**	**F value**	**Sig.**
Using technology is nice and easy					
Age groups					
50-64	634	0, 29	22,331	5, 990	.003
65-75	416	-0, 13			
Total	1050	0.12			
Cognitive age					
43-58	811	0.16	4.104	1.085	.354
59-69	205	0.00			
70-80	28	-0.36			
80+	11	0.55			
Total	1055	0.12			
Retirement stage					
Yes	571	-0.11	64.340	17.421	.000
No	456	0.40			
Total	1027	0.12			
Gender					
Female	516	-0.14	69.475	18.811	.000
Male	533	0.38			
Total	1049	0.12			
Subjective age					
young	11	1.09	34.338	9.350	.000
middle-aged	385	0.43			
aging	574	0.01			
old	80	-0.65			
Total	1050	0.12			
Cohabitant	85	0.05			
Single	63	-0.08			

TABLE 14:ANOVA (continues)

Using technology is nice and easy

	N	Means	Mean square between groups	F value	Sig.
Marital status					
Married	707	0.18	8.814	2.354	.052
Cohabitant	85	0.05			
Single	63	-0.08			
Widow	81	-0.42			
Divorced	114	0.36			
Total	1050	0.12			

TABLE 14: ANOVA:continued

In modern world, technology has a very central role. In their everyday life people use all kinds of technological appliances which make their lives easier. Like any other dominate issue, also the generality of technology arouses also opposite opinions, people can begin to feel that nowadays technology has too much power. By using the seven point Likert-scale from -3 to 3, the respondents were asking do the statement "technology has too much power in modern world" hold the truth in their case. The general opinion was that technology has too much power in modern world, because among all respondents it gained mean of 1.49 (Std.dev.1.699).

Conducted one-way variance analysis indicates that chronological age, retirement stage and gender have impact on that perception. As the table 15 shows, the variance among chronological age groups are statistically only almost significant, but the variance among genders and non-retired and retired is statistically significant. That means, gender and retirement stage have a significant effect on perception: technology has too much power in modern world.

According to the means, the younger respondents are more in the opinion that technology does not have too much power in modern world, whereas the older respondents are more in the opinion that technology does have too much power in modern world. Among genders, the female are taking this issue more positive than men. Men are use technology more than women and generally they have more positive perceptions about technology than women. This high level of usage can, however, make men to feel as they were "the slaves of technology."

As the means in the table 15 shows, the retired mature customers are more in the opinion of technology has too much power in modern world. According to the means, the difference between retired and non-.retired is big enough to be statistically significant. Cognitive age does not affect either on this perception, the ANOVA table shows, that there are no significant variances between cognitive age. Although the cognitive age doe not have a effect, the way how mature customer defines herself/himself has. The ANOVA table (table15) shows that the variance between different definitions is very significant (p .000) and the gained F-value big enough, so it can be stated that the way how mature customer define himself/herself has a significant effect on the perception "technology has too much power in modern world". Those, who define themselves as young or middle aged, are more strongly in the perception that technology does not have too much power than those who define themselves as aging or old.

It can not be said that marital status have a statistically effect on how mature customer sees the role of technology in modern world. As the ANOVA table (table15) indicates, the mean differences between different marital statuses are rather small. However, the table (table15) tells, that widowed mature customers are more in the opinion that technology has too much power in modern world than consumers with other status. The cohabitants are the less in the opinion that technology has too much power in modern world.

	N	**Means**	**Mean square between groups**	**F value**	**Sig.**
Nowadays technology has too much power					
Age groups					
50-64	670	1.35	15, 046	5, 235	.005
65-75	487	1, 68			
Total	1157				
Cognitive age					
43-58	811	0.16	0.260	0.090	.966
59-69	205	0.00			
70-80	28	-0.36			
80+	11	0.55			
Total	1055	0.12			
Retirement stage					
Yes	652	1.66	45.324	15.886	.000
No	476	1.25			
Total	1128	1.49			

TABLE 15 :ANOVA (continues)

	N	Means	Mean square between groups	F value	Sig.
Nowadays technology has too much power					
Gender					
Female	570	1.29	42.338	14.794	.000
Male	586	1.68			
Total	1156	1.49			
Subjective age					
young	10	1.40	10.326	3.590	.013
middle- aged	412	1.31			
aging	633	1.54			
old	101	1.88			
Total	1156	1.48			
Marital Status					
Married	776	1.50	12.719	3.180	.356
Cohabitant	92	1.25			
Single	73	1.44			
Widowed	100	1.73			
Divorced	115	1.38			

TABLE 15 : ANOVA(continued)

The mature customers are interested about technological development. If the percentages between “completely disagree” and “Completely agree” are compared, it can be observed that there are more mature customers who agree with the statement “I` m interested in technology development” (11.9 percent of all respondents) than those who disagree the statement (9.2 percent of all respondents.) Several demographic variables have impact on the interest in technology development. According to the conducted chi-square test (table xx), gender, age, education, retirement-status, profession and monthly income have a very significant impact on the interest in technology development. On the other hand, neither marital status nor cognitive age does have statistically significant effect. But the subjective age has a highly significant effect ($p< 0.01$).

The means show, how the observed effect occur in practice. Mature men (0.55, Std.dev 1.915) are find technology development more interesting than mature women (0.06, Std.dev.2.070) The younger are the more interested (0.59, Std.dev. 1.785) in technology development than 65-75 years old (-0.22, Std.dev 2.120). Not retired mature customers are more interested (0.80, Std.dev.1.818) in technological development than retired (-0.10, Std.dev.2.058).

In interested in technological development, the educational background is very important, there are big differences between different education levels. Naturally, those who have technical education (1.09, std.dev.1.714) are the most interested in technology development. These people have showed already that they are very strongly interested in technology, because the have chosen their working career in technical sphere. Also those who have university degree are quite interested in technology development (0.97, Std dev.1.536). Mature customers, who have elementary school (-0.34, Std.dev.2.140) or vocational school (0.07, Std.dev.1.988) as their educational background are least interested in technology development.

I am interested in technological development

	X^2	df	Sig.
Gender	70.064	6	.000
Age	41.637	12	.000
Marital status	34.098	24	.083
Education	98.283	30	.000
Retirement	42.180	6	.000
Profession	134.319	48	.000
Income	180.202	60	.000
Cognitive Age	20.622	18	.299
Subjective Age	35.030	18	.009

TABLE 16: Chi-square test: Technology development-interest & demographics

The way, how the mature customer thinks about technology has great impact on rewarding mobile service usage. The mature customer has to be interested in technology development and find the using technology nice and easy. Chi-square test shows that these perceptions have impact on rewarding mobile service usage and this affluence is statistically very significant. According to Spearman rho, the correlation is positive and statistically significant between mobile phone usage and both perceptions. This means, that the more interested the mature customer finds technology development and the nicer and easier the using technology, the likely he/she will use mobile services.

Mature customer has to find technology be more of a friend than enemy that she/he will use mobile services. If mature customers find that technology rules too much, he/she do not use mobile services. This implies that independence is very important to mature customers, as Wolfe (1994) has stated. The table 17 shows that there is negative correlation between rewarding mobile service usage and the perception that technology has too much

power in modern world (.-303**, p< 0.001). This means, the more mature customer feels technology to have power, the more unlike he/she use mobile services.

Technology perceptions	x^2	**df.**	**Sig.**	
Technology usage is nice and easy	165, 421	36	.000	.230 ** (p<0.01)
I´ m interested in technology Development	221.835	36	.000	.297 **(p<0.01)
Technology has too much power in modern world	187.187	36	.000	.-303**(p<0.001)

TABLE 17. Chi-square test & Correaltions: technology perceptions

6.3.1 Internet usage

A survey of adults aged over 50 years was conducted on the SeniorNet website September-November 2002. The questions concerned use of the Internet. The SeniorNet organization was founded in 1986 to help older people gain access to computing technology. The study shows that older people use Internet quite lot. According to the survey results, mature customers use Internet to stay in touch with friends and relatives, to stay current news and events and to research information (http://www.seniornet.org). Compared to these results, the Internet usage of the Finnish mature customers has the same features.

According to the results from the survey, it can be said that Internet has informative, social and practical role among mature customers. Information seeking about personal interest was the most popular reason for using the Internet, 31 percent of all respondents reported that they use Internet particularly for information seeking. For the Internet´ s informative role belong also information of current events and weather conditions. Of all respondents 11 percent said that they use internet mainly for following current events and 8 percent of all respondents said updated weather information be the mainly reason for Internet usage. The possibilities for many studying can be considered belong to the Internet´ s informative role, 8 percents of all respondents use Internet particularly for studying.

E-mail belongs to the Internet´ s social aspect. It makes easy to keeping touch with friends and relatives, and long distances don´ t matter. Although communication with

others via e-mail is very popular, mature customers do not participate in group discussions, only one percent of all respondents reported that they use Internet for taking part in discussions.

Helping in practicalities is the Internet ´ s third role. Banking via Internet is very popular among Finnish mature customers, 15 percent of respondents said they do their banking through Internet. Purchasing goods and services and making travel reservations is also part of the Internet´ s practicalities-aspect. Both purchasing goods and services and making travel reservations form equally share from the total internet usage, both gained 6 percent of the total usage.

According conducted one-way variance analysis (table 18), there are significant differences among different age groups in purposes of Internet are use. As the table xx shows, the 50-64 years old mature customers use Internet for reading and sending E-mail (p = .000), for information seeking (p= .000), purchasing goods and services (p=.000), studying (p=.000), following current events (p=.000), weather updates (p=.000) and working (p=.000) more than the 65-75 years old mature customers. As the p-values tell, under every of these purposes of use, age has highly significant effect on the usage.

According conducted one-way variance analysis (table 18), the Internet usage differs between age groups. Using Internet for sending and receiving e-mails differs significantly between age groups. As the ANOVA table (table18) shows, older age group use less Internet for sending and receiving e-mail than younger. It is still worth noticing that according the mean showed by table (table 18) 65-75 years old use e-mail quite lot. As told in chapter xx, among 50-64 years old there were more consumers who are still in working life than those who are retired. Those, who are still in working life use e-mail for daily communication and it can explain the difference between age groups. The older mature have fewer Internet connections. This implies, that older have fewer possibilities to communicate via e-mail with friends, who are with the same age. The statistically significant variance between age groups in using Internet for working can be explained with same way.

Using Internet for information seeking is more common also among younger mature customers. The conducted ANOVA table indicates that the usage of Internet for information seeking varies between age groups and this variance is statistically significant (p = .000). It is worth remembering that English is the dominate language in Internet and 65-75 years old Finnish do not speak English as much as the younger 50-64 years old. In addition, 46.05 percent of the respondents aged 65-75 said that hey completely agree the statement "I do not speak English and that prevents the Internet usage". Among 50-64 years, 20.30 percent agreed the statement completely. The statistically significant variance between age groups in using Internet for following of current events and weather updates can be explained also with this existing language barrier.

Younger mature customers use internet more for purchasing goods and services than older mature customers. The variance between age groups is statistically significant (p=.000). Mature customers are though to be potential customers for e-commerce, but this ANOVA table, shows that they use rarely internet for purchasing the goods and services. However, maybe in future, when those who are now 50-64 years old are older the purchasing will grow. In future it would be interesting to study, is the usage of those who now are 50-64 remained the same. Younger mature customers use Internet more for studying than older mature customers. The variance between age groups is statistically significant (p=.000), so it can be stated that age affects significantly for using Internet for studying.

	N	Means	Mean square between groups	F value	Sig.
E-mail					
50 - 55 years	217	2.74	24.072	11.990	.000
56 - 64 years	227	2.44			
65 - 75 years	151	2.01			
Total	595				
Information seeking					
50 - 55 years	206	2.43	18.011	16.604	.000
56 - 64 years	216	2.26			
65 - 75 years	132	1.77			
Total	554				
Banking					
50 - 55 years	205	2.71	6.454	2.571	.077
56 - 64 years	214	2.61			
65 - 75 years	149	2.33			
Total	568				
Purchase of goods and services					
50 - 55 years	171	.74	7.513	10.971	.000
56 - 64 years	175	.53			
65 - 75 years	105	.26			
Total	451				
Studying					
50 - 55 years	164	1.09	12.909	13.354	.000
56 - 64 years	171	.86			
65 - 75 years	102	.45			
Total	437				
Travel reservations					
50 - 55 years	171	.75	.510	.530	.589
56 - 64 years	175	.67			
65 - 75 years	111	.63			
Total	457				
Group discussions					
50 - 55 years	165	.18	.151	.465	.628
56 - 64 years	169	.13			
65 - 75 years	107	.19			
Total	441				
Following of current events					
50 - 55 years	177	1.55	12.333	8.922	.000
56 - 64 years	189	1.49			
65 - 75 years	113	.99			
Total	479				
Weather updates					
50 - 55 years	175	1.35	15.233	11.177	.000
56 - 64 years	187	1.24			
65 - 75 years	111	.70			
Total	473				
Working					
50 - 55 years	195	2.56	136.533	67.991	.000
56 - 64 years	193	1.77			
65 - 75 years	107	.58			
Total	495				

Scale: 0 = never 4 = always

TABLE 18 : ANOVA: Internet Usage

Internet usage can be considered to be part of technology perception. Internet usage has affect on mobile service but there are great differences between "levels" of Internet usage. If the mature customer uses Internet connection to everything else but not for purchasing goods and services it decreases the usage of mobile services; correlation s r_s = -.041($p<0.01$) On the contrary, when Internet connection is used especially for purchasing goods and services the mobile services usage increases. Purchasing via Internet has significant impact on rewarding mobile service usage, the p-value is .000. According to correlation r_s = .244** , if the mature customer has purchased something via Internet he / she will use more mobile services too.

	X^2	*df*	*sig.*	r_s
I use Internet connection	34.471	42	.789	.-041 (p>0.01)
I use Internet connection for Purchasing goods and services	66,981	24	.000	.244** (p<0.01)

TABLE 19: Chi-square & correlations: Internet -usage

6.3.2 Motives for Mobile phone usage

A conducted factor analysis shows that there are two factors which are affecting mature customers´mobile phone usage.The factors were chosen in terms of eigenvalue over 1.00, the eigenvalues for factors were: factor 1: 2.753, factor 2: 2.050. The factors can be named as

F1 development and pressure from outside

F2 useful mobile phone

The factor F1 contained issues related to mobile phone features and development whereas the second factor F2 contained issues related mobile phone usefulness. The table xx contains the summary of means counted for the factors by age groups. Question were asked by using seven point Likert scale from -3 (not at all important) to 3 (very important).

Factors affecting mobile phone usage "*things affected on my decision to purchase my present mobile phone*"	**F1**	**F2**
Mobile phone creates safety		.668
It gives flexibility		.616
It helps communication with my children and grandchildren		.682
Advertising	.647	
I wanted more features to my mobile phone	.738	
The possibility for using mobile- Internet	.701	
Pressure from environment	.617	

Table 20: Rotated factor matrix: Factors affecting the mobile phone usage. Cronbach´s alpha: Factor 1 : 0.7345, Factor 2: 0.7804

According to the means the factor F1 explains better the mobile usage of 50-64 years old mature customers, whereas the factor F2 explains better the affecting variables of the mobile phone usage of 65-75 years old. According to the factor analysis (table xx) and summary of means (table 20), it can be stated that the benefits which mature customers will gain via mobile phone differs between age groups. For younger, 50-64 years old, mature customers these benefits seem to be staying updated and belonging to the group. It can be also said that younger mature customers are more open for information and even pressures from outside. However, it is worth remembering that advertising can be considered to be either pressure to do something or information.

The older mature customers, age of 65-75 years old, use mobile phone because it gives possibility keep touch with younger generation, their children and grandchildren; it creates feeling of safety and gives flexibility. The older mature customers want to feel safety, but still they do not want to stay in the same place all the time. The mobile phone enables visit new places and at the same time it gives the feeling that if something goes wrong, they can gain help fast. Compared to younger age group, it seems that outside pressures are not so powerful among older mature customers than among the younger.

To get know why those 20 percent of respondents do not use mobile phone, the factor analysis was conducted among them. The analysis (table 21) showed that there are two factors which are explaining the non-usage. Also these factors were chosen in terms of eigenvalue over 1. Eigenvalue for factor 1 was . 998 and for factor .623. The factors were named as

F1 independence

F2 using mobile phone is too difficult

	F1	F2
I don´t use mobile phone because		
I don´t want to be dependent on mobile phone	.814	
I can cope with wire telephone	.747	
I do not want to be reachable all the time	.751	
I do not want technology to rule me	.740	
Using mobile phone asks special know-how		.628
Present mobile models have too many features		.522
I don´t handle technical appliance in general either		.743
The instructions of mobile phones are too difficult		. 892

TABLE 21:Factor Analysis

Extraction method: Principal Axis Factoring. Rotation method: Varimax with Kaser Normalization.

Cronbach´ s alpha for F1: 0.8850, Cronbach´s alpha for F1: 0.8447

Factor F1 is called independence from technology, because as the table xx shows, the factor F1 is loaded with the statements which implicate the will to be not dependent of technology. The second factor, factor F2, is loaded with statements implicating the difficulties in technology usage. According to the table 22, the loadings of Factor 1 gained bigger means among older consumers.

	50-64 years		**65-75 years**	
	mean	**Std.dev**	**mean**	**Std.dev**
Mobile phones creates safety	2.12	1.258	2.41	1.103
Mobile phone gives flexibility	1.04	1.934	1.27	1.840
It helps communication with my children	1.11	1.991	1.41	1.838
Advertising	-2.55	1.229	-2.71	0.994
I wanted more features to my mobile phone	-2.22	1.629	-2.40	1.459
The possibility for using mobile-internet	2.20	1.632	-2.55	1.339
Pressures from environment	-2.33	1.526	-2.48	1.373

TABLE 22: Summary of means

Keeping touch with children, the possibility for using mobile Internet, flexibility and new features in mobile phone are the mobile phone purchasing motives, which have statistically highly significant ($p=<0.001$) effect on also the usage of mobile services. As the table xx shows there are positive correlation between rewarding mobile service usage and these motives. The strongest correlation is between "possibility to use Mobile Internet" and rewarding mobile service usage, $r_s= .277^{**}$, $p<0.01$. This means that the stronger

motive for using mobile phone is the possibility to use mobile Internet, the more likely this mature customer will also use mobile services. Its also implies that the Internet usage has effect as it was founded in the chapter 6.3.1

The second strongest correlation is between "I wanted more features to my mobile phone" and mobile services usage, r_s = .227** (p<0.01). According to that it can be said that mobile services can be seen also as one of mobile phone´ s many features. The third strongest correlation is between rewarding mobile service usage and flexibility (r_s= .141**, p<0.01). This factor belonged the motives which were important to 65-75 years old, and it can be said that the more is the flexibility which mobile phone enables the more likely mature customer will use mobile services. The fourth motive, which have a highly significant effect on mobile services usage in keeping touch with children and grandchildren. This motive also have significant positive correlation (r_s =.121 ** , p<0.01). with rewarding mobile service usage. This means that the stronger impact keeping touch with children has on using mobile phone, the more likely the mature customer uses mobile services.

Motives for mobile phone usage	x^2		**df.**	**Sig.**	
Keeping touch with children		53, 027	36	.000	121 ** (p<0.01)
The possibility for using mobile Internet		124, 573	36	.000	.277 ** (p<0.01)
Pressures from environment		60, 133	36	.007	.084 *(p<0.05)
Mobile phone gives flexibility	1	13.295	36	.000	141** (p<0.01)
Mobile phones creates safety		59,078	36	.009	002 (p>0.01)
I wanted new features to My mobile phone	1	17.656	36	.000	272**(p>0.01)
Advertising		60.892	36	.006	108** (p<0.01)

TABLE 23: Chi-Square test&correlations: motives for mobile phone usage

6.4 COMSUMPTION KEY VALUES

As mentioned in chapter 3, David Wolfe(1994) has founded, that five key-values are motivating the mature customers´ consumption. These five values are, autonomy and self-suffiency, social&spiritual connectedeness , altruism, personal growth and revitalization.

According to table 24 each of these value have also effect on rewarding rewarding mobile service usage among mature customers. As the table 24 shows, social and spiritual connectedness have strongest relationship with rewarding mobile service usage. As mentioned already in chapter 3, Wolfe (1994) connectedness is largely a social issue. It includes for example meeting new people and inter generation connectedness. Mature customers are supporting the companies, which are doing intergenerational advertising. (Leventhal 1997, 278.)

As mentioned in the chapter 6.3.2, keeping touch with children and grandchildren belonged to mobile phone usage motives. Also this implies, that social connectedness and intergenerational relationships are important to mature customers. Mobile phone can also be seen of some kind of intergenerational symbol: both young children and older adults are using it, it builds some kind of bridge between these two generations.

Revitalization has also strong relationship with rewarding mobile service usage. Mature customers seem to consider mobile services to able to create something that makes them feel vital. For example by playing mobile games, mature customers can feel that he/she is getting something which makes him or her feel younger.

It is interesting to notice, that autonomy and self-suffiency has much weaker relationship with rewarding mobile service usage experience than revitalization and connectedness. This result implies, that mature customers do not feel that they could maintain or support their independency via using mobile services. The services providers should take this into account when they are planning new services for future markets.

Key – Values	x^2	**df**	**Sig**	
Autonomy & Self-suffiency	192, 491	36	.000	.271**
Social &spiritual connectedness	304, 400	36	.000	.400**
Altruism	156, 889	36	.000	.291 **
Personal Growth	118, 880	36	.000	.136**
Revitalization	101, 544	36	.000	.302 **

TABLE24: Chi-square-test& Correlations: Key-values

6.5 MOBILE SERVICE USAGE

The mature customers use mobile services, 21.3 percent of all respondents have used at least one mobile service. The Pearson´ s correlation coefficient strengthens that among age groups there are differences in usage of different mobile services. Correlations show that age correlates negatively with usage of mobile services. This means that the younger aging customer is, the more she/he will use these mobile services. The correlation is significantly negative with usage of loaded ticket (r = -.063*), postcard (r = -.070*), picture greetings (r = .-151**) text message chat (r = -.128**), logos (r = -.209), ring tones (r = -.179**), news services (r = -.112**), weather information (r = -.143**) and event notification (r = -.086**).

Also other demographic variables as age affect the usage of different mobile services. Education correlates positively with all other services but negatively with playing mobile games (r = -. .02, p>0.10), offers sent to mobile phone (r = -.044, p>0.10) and event notification (-.005, p>0.10). This positive correlation means that the higher education aging customer has, the more he / she uses these mobile services. When the correlation is negative, the lower education aging customer has the more he/she uses the service.

Income has also impact on mobile service usage. Correlations show that income has significant positive correlation with usage of picture greetings (r = .090**, p<0.10), text message chat (r = .088**, p<0.10), location service (r = .085**) ring tones (.109**), news services (r = .159** p<0.10), weather information (r = .189**), time tables (.108**), parking ticket payment (r = .073* p<0.), ticket reservations and ordering (r= .164** p<0.10) and event notification. This means that the higher income level is the more they use these mobile services. Income level does not automatically correlate positively with all mobile services. Between the usage of loaded ticket and income correlation is negative, so when the income level is lower the usage of loaded ticket is greater.

The “lower” the profession the mature customer has, the more he/she will use loaded ticket (r = -0,013, p>0.10), postcard (r = -0.032, p>0.10), ordering and playing mobile

games (r = -.065*, p<0.10), logos (r = -.071*, p<0.10) and offers send to mobile phone (r = -0,031, p>0.10). There is very weak negative correlation between profession and offers send to mobile phone, but it yet tells that there is a relationship between these variables. The correlation coefficients tell also that the there are statistically significant positive correlations between both profession and time tables (r = .115**, p<0.10) and between profession and ticket reservations and ordering (r = .120**, p<0.10).

In general mature customers are taking mobile services quite positively. Mobile services are considered to satisfy aging customers´ needs quite well. Mobile services are also thought to be time-saving and fairy easy to use. Aging customers are considered to take new products with a grain. On the contrary, they will try new products, but they will try them for different reasons than the younger market. Ageing consumers have had a lot of experience and they are not going to try something because it is trendy or it is the "the thing to do". They are going to try something if it can meet a personal, specific need that they have. The ageing consumer is discerning and very selective. The actions are more important than words to ageing consumers. (Leventhal 1997, 279.) This is also seen from results of this study. Respondents say that mobile services do not produce great pleasure to them and they admit that they would maybe use mobile services if they would produce some benefit to them. It is positive to observe that statement " I´m going to learn how to use mobile services" gained positive mean.

The figure (figure 6) shows that mature customers think that using mobile services they can save time (mean 1.03, Std.dev 2.054), mobile services and the present mobile services are satisfying their needs well (1.97, Std.dev. 1.592). However, they are in the opinion that mobile services do not produce pleasure to them (-1.54,Std.dev.1.848).

Poor availability, being difficult to use or unsure functionality are not the reasons why more than 20 percent of mature customers do not use mobile services. In their opinion mobile services are quite easy to use (0. 27, Std.dev.2.043) and they know how to get mobile services at their use, the statement "I do not know how I can get mobile services at my use" gained a mean of -1.13 (Std.dev.2.165) The statement " their functionality is

unsure" gained negative mean (-0.89, Std.dev.1.919), so it can be interpreted that mature customers find mobile services´ functionality be sure. Mature customers find the prices of mobile services quite expensive, the statement "mobile services are expensive" gained a mean 0.69 (Std.dev.2.146).

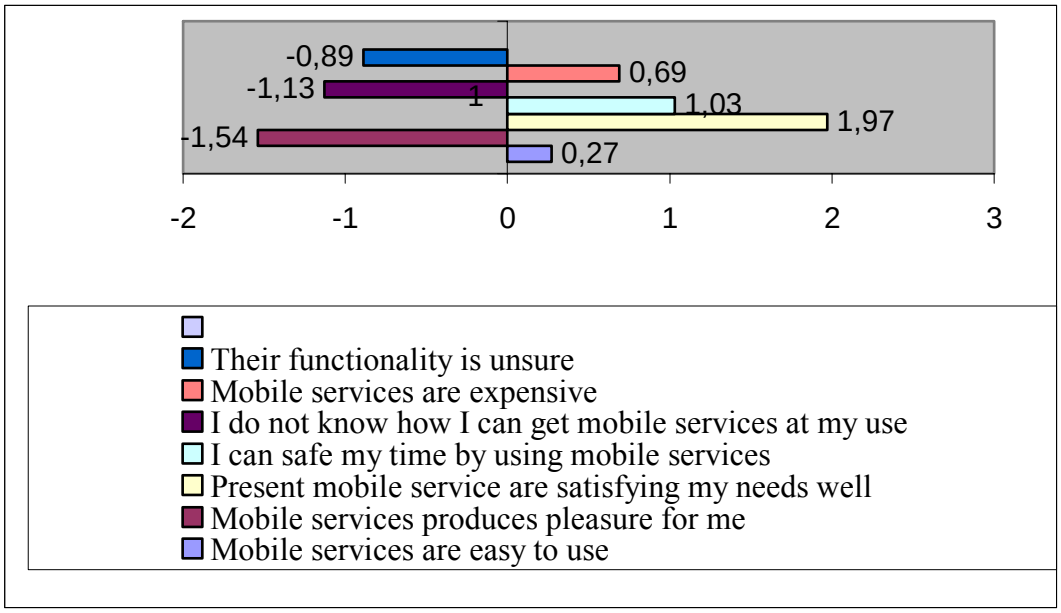


FIGURE 6 : Mobile service perceptions

Mobile service perceptions correlate with the mobile service usage. The strongest relationship seem to be between gained pleasure and usage (r_s = .436**, p<0.10). The more pleasure mobile service produces to them the more they use mobile services. Easiness to use is the second important factor which increases the mobile service usage, the easier to the easiness to use seem to be more important to older than younger mature customers (r_s = 305 **, p<0.10)so important to older mature customers as to younger ones. The third mobile service perception influencing mobile service usage is the possibility safe time. If the mature customer perceives that by using mobile services he she will gain some time-saving, the more she /he uses mobile services. The correlation between time saving and mobile service usage is strongly positive, r_s = .230 **, p<0.10

Demographic variables affect the mature customers´ want to learn to use new technology. Younger, 50-64 years old want more to learn to use technology. The high school graduates and those, who have university degree, are keener to learn to use technology than

those who have vocational school, trade school or vocational school as their educational background. The lowest the want to learn to use technology was among those who have elementary school as their educational background. Managers, entrepreneurs and clerical workers seem to be more interested than civil servants, clerical workers, workers and farmers. The house wives are most unwilling to learn to use technology. The summary of means shows that if the mature customer´ s monthly income is 3601- 4500 Euros, he or she will be highly interested in learn to use technology. (Summary of means is attachment 3)

The older mature customers (65-75 years old) are more willing to learn to use mobile services than the younger ones: 26.3 percent of 65-75 years old mature customers are going to learn to use mobile services, whereas 21.7 percent of 50-64 years are going to learn to use mobile services. Of all mature customers, 21.7 percent are going to learn to use mobile services.

As mentioned earlier, mature customers think that mobile services do not produce pleasure to them. It means that the contents of present mobile services are not right for mature customers. The most interested mobile services would be those which are related to health care, counseling and relationships. Services related to Entertainment (games, horoscopes), Fashion and beauty and charity are the most uninteresting mobile services.

	50-64	65-75	all
Health care	13.3 %	32.7%	15. 9%
Bank and insurance	13. 2 %	19.2%	11.7%
Fashion and beauty	1.6%	1.6%	1.2%
Traveling	6. 3 %	10.9%	6.1%
Home and furnishing	2.2 %	2.8%	1.8%
Charity	1.8%	4.2%	1.9%
Entertainment	1.3%	1.4%	1,0%
Counseling	9.3%	19.6%	10.0%
Current affairs	6.4%	9.9%	5.8%
Relationships	10.2 %	16.8%	9.6%
Investments	3.1 %	5.3%	2.6%

TABLE 24: I´m going to use mobile services related to

It is worth noticing that older group, 65-75 years old, is more intended to use mobile services in general than younger group, 50-64 years old) 32.7 percent of older respondents told that there is a strong possibility that they will use mobile service which is related to health care. Also counseling and Bank and insurance are also services that 65-75 years old consumers are going to use. Among younger age group 13.3% percent of respondents are intended to use mobile service related to health care. Services related to bank and insurance interested almost as much: 13.2 percent of younger respondents found that there is strong possibility that they will use mobile services related to bank and insurance. The third popular subject for mobile services is relationships.

Demographic factors seem to have some impact on aging customers´ intention to learn to use mobile services. The chi-square test shows that income has the greatest impact on the intention to learn to use mobile services; income have significant p-value ($p = .007$) and Also education ($p = .002$) has significant p-values. It is worth noticing that neither chronological nor cognitive age does not have significant impact on the intention to learn to use mobile services. On the contrary, cognitive age seems to have lowest impact on the intention to learn, because its´ p-value is biggest ($p= .509$).

General positive attitude towards other technological devices influences the intention to learn to use mobile services. Respondents were asked how they consider following devices and services in general: WAP, text-messages, multimedia messages, computer, digital-TV, e-mail, automated service and personal service. It was founded that there are positive and statistical significant correlation between intention to learn to use mobile services and several listed devices. For example, there is positive and statistically significant correlation ($r_s = .242$ **, $p<0.10$) between WAP and the intention to learn to use mobile services. This means that the more positive attitude towards WAP the aging customer has, the likely he or she will learn to use mobile services. Also between multimedia messages and intention to learn is statistically significant positive correlation, $r_s = .224$, $p<0.01$. So, the more positively the aging customer finds multimedia messages, the more likely he or she will learn to use mobile services.

The intention to learn to use mobile services correlates positively also both personal service (r = .015, p >0.05) and automated services (r = .161**, p<001) It can be noticed that the correlation is statistically significant only with automated services. These correlations tell that if aging customer appropriate personal service he or she will probably learn to use mobile services, but if he or she appropriates automated services, there is even statistically significant probability that he or she will also learn to use mobile services. There is significant, negative correlation (-.146**, p<0.001) between the statement "I prefer do business with a clerk than with call center" and the intention to learn to use mobile service.

	X^2		df.	Sig.
Gender	6.762		6	.343
Age	17.750		12	.123
Marital status	30.338		24	.174
Education	58.082		30	.002
Retirement	12.848		6	.046
Profession	57.444		48	.165
Income	90.610		60	.007
Cognitive Age	17.210		18	.509
Subjective Age	17.141		18	.513

TABLE 25:

The positive opinion towards mobile phone is a key factor in the intention to learn to use mobile services. If an aging customer considers mobile phone to be a device which creates safety (r_s = .236**, p < .001), helps maintain independence (r_s=.277**, p<0.001), enables the usage of many beneficial mobile services (r_s = .336**, p< 0.001) he or she will learn to use mobile services in all likelihood. If an aging customer find mobile phone practical device than status symbol ($_sr$ = -.168** p = 0.001) or device meant only for the use of younger people (r_s =.-177**, p<0.001) and beneficial in every day use as a calendar for example (r_s= .185**, p 0.001) he will learn to use mobile services also. It is also worth noticing that there are no kind of connection between the intention to learn to use and statement "mobile phones are developing too fast" (r_s=.000, p=.991)

Positive opinion about mobile services is also very important for an aging customer will want to learn to use mobile services. The intention to learn to use mobile services corre-

lates positively and statistically significant with statements “mobile services are easy to use” (r_s = .207**, p <0.001) “mobile services produce pleasure” (r_s = .315**, p = 0.001) and “I can safe my time by using mobile services” (r_s = .380**, p<0.001). On the other hand between the intention to use and statements “mobile services are expensive” (r_s = -.110**, p<0.01) and “their functionality is unsure” (r_s= -.142** , p < 0.001). Also these correlations are statistically significant.

The easier an aging customer finds mobile service usage, the more pleasure mobile services creates to he or she and the more timesaving he or she considers mobile services to be, the more likely he or she will learn to use mobile services. Considered price and functionality impact on the intention to learn to use mobile services. If an aging customer finds mobile services cheap and reliable he or she will more likely to use mobile services. It is interesting to observe that pleasure produced by mobile services has more affect that benefits that mobile services produce. It is common opinion that aging customers prefer beneficial services more than pleasurable services, but in this case this common opinion seems to be wrong.

According to chi-square test more demographic factors are affecting on the intention to recommend the usage of mobile services than on the intention to learn to use. Gender (p = .003), age (p = .019), education (p = .004) and income level (p= .001) have impact on the intention to recommend. Is a person a retiree or not is also is also impacting factor.
Chi-square test revealed that gender and income level are the most influenced demographic factors. The mean comparison clarifies how gender and income level affect : men (mean -1,98) recommend the usage of mobile services more often than women (mean -2,11) and those, who earn more than 5601 euros per month will recommend mobile services more than those whose monthly earnings are less than 5601 euros per month. It is interesting to notice that profession has no significant impact, but education and income level has.

Gender	**mean**	**Std.dev**
woman	-2,11	1.614
man	-1,98	1.643

TABLE 25 Scale -3 - 3 I´ m intent to recommend the usage of mobile services:

Income	Mean	Std.deviation
400 – 800 €	-2.24	1.717
801-1200 €	-2.07	1. 659
1201-1600 €	-1.90	1.729
1601-2000 €	-1.96	1.550
2001-2400 €	-2.31	1.177
2401-2800 €	-1.96	1.564
2801-3200 €	-1.50	1.782
3201-3600 €	-2.36	1.256
3601-4500 €	-2.21	1.371
4501-5600 €	-1.93	1.817
More than 5601 €	-1.14	1.703

TABLE 26
I´ m intend to recommend the usage of mobile services
(Scale -3 – 3)

If mature customer has a strong intention to learn to use mobile service, he or she will recommend the mobile service usage also to his friends. Statements "I´m going to learn to use mobile services" and "I´m intend to recommend the usage of mobile services to my friends" have positive correlation ($r_s = .329$ **, $p<0.001$). It is interesting to notice, that even an intention to use have positive relationship with the intention to recommend. Both among younger mature customers (50-64 years old) and also among older mature customer (65-75 years) this positive relationship exists, but it seems to be stronger among younger group. Among 50-64 the Spearman ´ s rho is .347 ** ($p<0.001$) and among 65-75 .290 ** ($p<0.001$). It is interesting to observe, that the correlation is a bit stronger among younger mature customers than among older mature customers, because the older an individual is the rather she/he wants to spent his/her spare time with other people ($r_s = .092$**, $p<0.001$)

According to these correlations, it can be said that the altruism is more important to the younger mature customers than to older mature customers. If mature customer founds that using mobile services she or he would gain something worth pursuing, something that satisfies his/her needs, he/ she want that also his/her friends have the same possibility. Mature customer wants share enjoyable or beneficial things with friends.

Other interesting finding is that there are negative correlations between the intention to recommend mobile services and statements "I think twice my spending" (r_s = -.100**, p <0.01) and "I steer clear of taking risks" (r_s = .-145**, p<0.001). Mobile services are clearly considered to be some kind of economical risk. This supports also the importance of altruism: mature customers do not want to recommend risk to their friends.

	X^2	df	sig.
Gender	19.596	6	.003
Age	24.239	12	.019
Marital status	31.660	24	.136
Education	54.084	30	.004
Retirement	11.285	6	.080
Profession	49.899	48	.389
Income	99. 964	60	.001
Cognitive Age	17.102	18	.516
Subjective Age	31.856	18	.023

TABLE 27: Chi-square test: intention to recommend mobile services and demographic variables

As mentioned before in chapter 3, Dale A.Lundsford and Melissa Burnett (1992) have founded five barriers which have to be overcome when marketing new product/services to mature customers. The first barrier is that product usage is not compatible. Mobile phones are essential in mobile services usage, without a mobile phone mobile services can not be used. Among mature customers there is a perception that mobile phones ´ instructions are too difficult and present mobile phones have too much features. Nowadays mobile phones are quite small, and that can be problem to some mature customers. Mature customer can find the usability of mobile services poor because of too small mobile phone, for example the screen is small, so mature customer can have difficulties to see the text from it.

Mature customers say that present mobile services satisfy their needs. On the other they say that mobile services do not produce pleasure to them. As the table xx shows, mature customers are interested in using mobile services, especially the older mature customers would like to use mobile services. The problem seems to be, that present mobile services do not deliver those values or benefits which mature customers find important. Mature

customers are not interested in using mobile games, but they are interested in using mobile services which are related to heath care.

The results show that self-image has an effect on mobile service usage, especially subjective age. The results also showed that only 0.2 percent of 50-64 years old and 22.5 of 65-75 consider themselves as old. This does not mean, that mature customers consider themselves to be "young", the right term to describe, according to them, is "aging". The present mobile services are more targeted to young than to aging. The results also showed that the mature customers will use mobile services more likely if they see themselves as some kind of innovator (the first, who tries new products among his/her friends) . The results also showed that these "innovators" are more likely women than men. But according to results, men are "technology-innovator". More men than women think that they are more interested in technology. The service providers should notice that women are morkeener to use new products and services, but they can fear to use technology and men are more interested in technology but they hesitate to try new products or services. Based to these reasons, mobile service providers would segmentate the mature markets carefully.

According to Lundsford and Burnett, the fourth barrier in technology acceptance is that technology products do not delver enduring cultural values (Lundsford et al 1992, 56) Especially those 65-75 years old mature customers have cultural values that differs from younger generations´ values. It is worth remember that those Finnish mature customers who are now 65-75 years old remember the War time [1] and the economical shortage after the wars. They have not used to consume just for fun but only for "real" want. Mobile services can be thought to present more vanity than necessity. As the chapter 6.4 discussed, present mobile services are not taking the five key-values into account the way their should be taken.

Mature customers can found mobile services to contain many risks. As mentioned in the chapter xx, some mature customers consider mobiles services as economical risk and because of that, they do not recommend the mobile service usage for their friends. On the

other hand, mature customers do find the functionality of mobile services to be good. The service providers should concentrate on reducing that economical risk.

1) Finland was at war 1939-1945

7. Conclusions

The rewarding mobile service user experience is consisting of technology perceptions, Internet usage, self-image, innovativeness, motives of mobile phone usage, five key values and demographics. The strongest relationships were founded to be between issues connected to innovativeness and mobile service usage. Also general technology perceptions about technology development, its role in general and easiness to use have strong relationship with mobile phone usage. Both Internet usage and motives for mobile phone usage were founded to have an effect and relationship with mobile service usage. Also demographic variables and self-image is affecting, but these factors have a much weaker relationship with mobile service usage.

The chronological age of does not influence much on mature mobile service users´ user experience. Of the three different dimensions of age, the subjective age has the strongest effect on mobile service usage among mature customers. Still, it is worth remembering, that subjective age is not so trusty age measurement as chronological age or cognitive age.

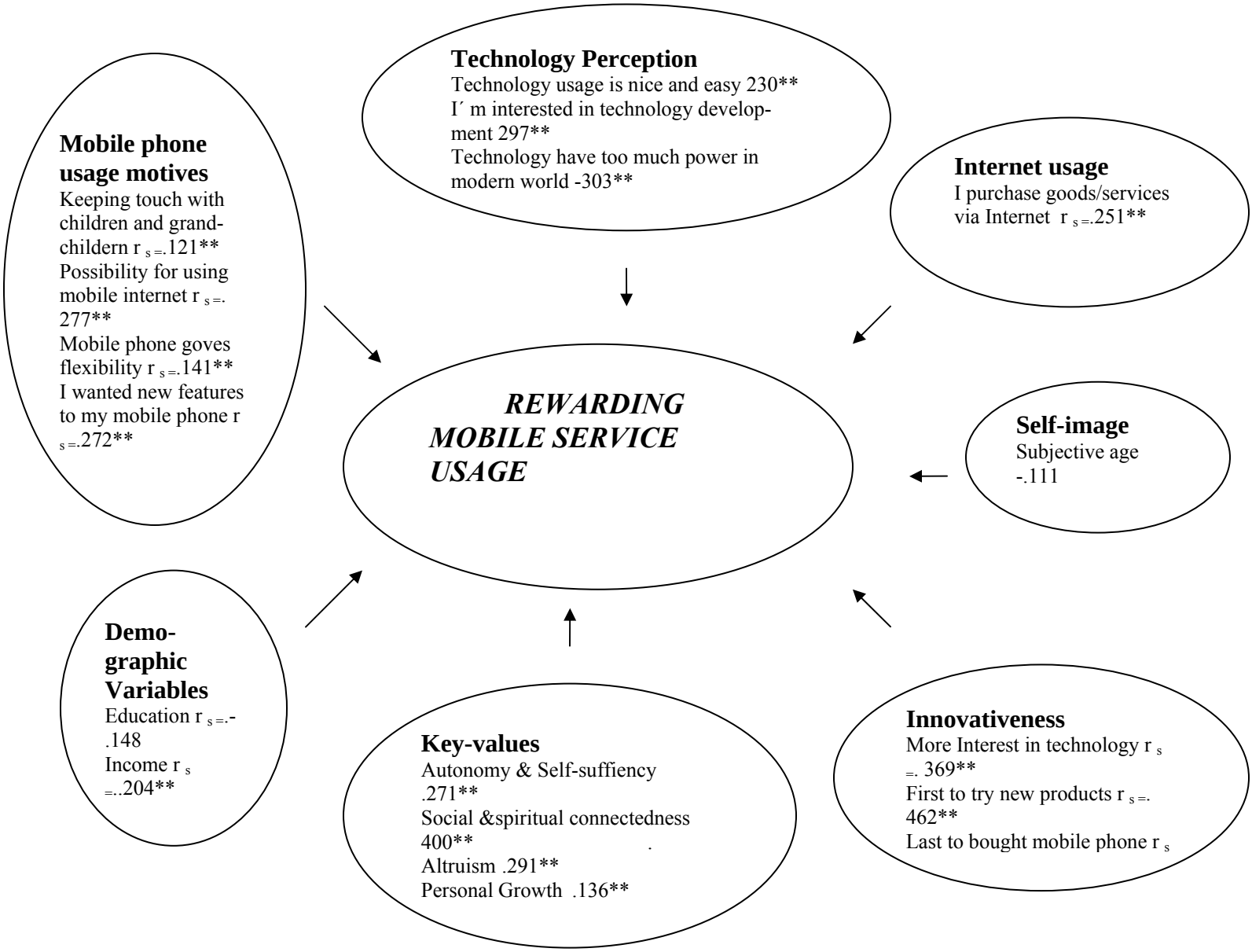
The younger mature customers 50-65 years old use more mobile services than 65-75 years old. However, the older age group is more willing to learn to use mobile services, if they service can satisfy his or her needs. The biggest problem today is, that mature customers` needs and service providers offers do not meet. The other issue which is preventing the wider usage of mobile services is the fact that women among mature customers' women are those who are willing to use mobile services, but they are not interested in technology. On the other hand men are very interested in technology but they are not very willing to use new products and services.

In the chapter 4, two hypotheses were formed. The First was *"The perceptions and usage of internet affect on and the motives for mobile phone usage have an effect on mobile service usage among mature customers"* According previous chapters, this hypothesis can be accepted. The second hypothesis was *"The general technology perceptions, demo-*

graphics, innovativeness and self-image affect mobile service usage among mature customers". This hypothesis can also be accepted. Also hypthesis *"The five key values motivate consumption of mature customers´"* are proved to hold true, as the figure

The Figure 7 sums up the affecting variables and tells what kind of relationship these variables have with rewarding mobile services user experience. All variables in the figure have gained significant result from chi-square test.

FIGURE 4 : Rewarding Mobile service user experience



7.1 Limitations of the study

The issues of validity and reliability were discussed in the chapter 2.3. This study fills the basic demands of validation. The validity issues were considered before actual data gathering. The sample was conducted by independently and it contained informants which were right consider the objectives of this study; 50-75 years old people. The high final response rate (50%) also improves the validity of this thesis. The gathered data was large enough and it gave answers the questions that were stated before data gathering.

This thesis also fills the basic demands of reliability. Several data analyzing techniques were used to study same object. By doing this it was wanted to ensure that right conclusions were made. Also reliability issues were considered when the final questionnaire was planned. The questions and answer choices were based on previous studies and conducted interviews. The used scales were based on previous research (e.g Barak´s scale for Cognitive age).

In this thesis, the quantitative research method was used. The quantitative research seeks to secure data to test determine the extent to which they provide a meaningful explanation of the real world. The problem in data collection to test ideas is deciding when enough data have been collected to make a decision on the idea being tested. (Rigby 1964, 191). Although this study has a very high total response rate 50%, it contains still a problem. It is worth remember, that the half of the sample did not respond the questionnaire.

Using postal questionnaire contains also problem. It can not be totally sure that who actually filled the questionnaire and did the respondent understand every question in right way. Among 50-75 years old respondents there could have been people who can not fill questionnaire by themselves and their relative or somebody else has filled the questionnaire on behalf of them.

7.2 Contributions of the study

Methodologically this study makes a contribution by investigating the new model and it´s suitability. This thesis makes also contributions to the theory of mature consumers. It describes their behavior as users of technological product and gives knowledge about the factors that are affecting mature customers´ mobile service usage.

Empirically this thesis gives its contribution to studies of mature customers. It gives new knowledge about mature customers and their information technology, especially mobile services, usage. It gives important tools for marketers who are acting in the mature market. After reading this thesis marketer will get new information about mature customers and what factors affect their mobile service usage. In addition it gives also knowledge gives the knowledge of the barriers which have to overcome when marketing mobile services to mature customers.

This thesis makes a great contribution for marketers. Because in future mature customers will be very important consumer segment, the marketers have to know lot about their consumer behavior. After reading this thesis, the marketer has gains lot information about mature customers. The marketer will notice that mature market are far from homogenous and that different dimensions of age has different effects on mature customers behavior. The marketer knows what things are affecting the mature customers´ decision to accept a new service in the field of technological services.

7.3Future research

There are many possibilities for future research considering mature customers. This thesis concentrated mainly on those factors which are affecting positively mobile service usage. The first suggestion for future research is related to adaptation of innovation. The issues that are affecting to adaptation of innovation have been research a lot, but there are not lots of studies about the resistance of innovations. The knowledge about the issues that are affecting innovation resistance can be considered be as important as knowledge about

the issues that are helping adaptation of innovations. It would be interested to research those things that hinder the mobile service usage among mature customers.

The second suggestion for future research is also connecting to the adoption of innovations. In this thesis, it was even tried to define exactly what kind of person can be called as mature innovator. However, this thesis implied that women were keener to try new products. It would be interesting to study who are the typical mature innovator. Also this knowledge would be very useful in future both academically and practically.

This thesis it was studied which factor affect mature customers mobile service usage. These factors were mainly demographic factors. The second suggestion for future research is to study the affecting factors in mobile service usage among new-age and traditional elderly. This thesis gives knowledge about perceptions and demographic factors affecting the mobile service usage, but it does not discus the possible lifestyle- factors that can affect also the mobile service usage.

One of the major contribute of this thesis is the developed model of the factors affecting mobile service usage. It would very interesting to study does this model work also in other context. Because mobile phone is so closely related to mobile services, one of the suggestions for future research is to study can the same model be adapted also in case of mobile phone. What factors affect on mobile phone usage among mature customers? Because there has been made research about mobile phone usage among adolescence (e.g Ling 200) the usage patterns can be compared.

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