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# Consumer Involvement Related with Usability and Sociability in Digital Service


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# Abstract


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| **Title:** | **Consumer Involvement Related with Usability and Sociability in Digital Service** |
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| **Keywords:** | Consumer involvement, Usability, Sociability, Digital service |
| **Thesis purpose:** | The purpose of this thesis is to investigate the nature and scale of usability and sociability's influence on consumer involvement within. |
| **Methodology:** | A quantitative quota sample survey study on 219 respondents with 203 valid results. Through a deductive approach the thesis tests hypotheses. ANOVA is used for testing hypotheses; Factor analysis is used for the reduction of variables; Regression analysis is used for examining the degree of influence. |
| **Theoretical perspective:** | Digital service is the service delivered through digital boxes. Consumer involvement is a structure of consumers' perception about product and service which include 5 components: interest, probability of risk, importance of risk, rewarding nature and symbolic value. Usability is the usage of digital service. Since digital service begins to offer social interactive function, sociability is involved into consumer involvement. Sociability includes interaction, feedback and personal trait. Consumer involvement can be influenced by both usability and sociability. |
| **Empirical data:** | Quantitative method is used for data collection. Questionnaire is distributed through email and internet. |
| **Conclusion**: | Both usability and sociability influence consumer involvement. Usability has broader scope of influence, sociability has deeper scale of influence. Consumers focus on convenience of digital service. Consumers have the intention to interact through digital service but feel reluctant to take action. Uncertainty about social risk is the reason. |

# Acknowledgements

This master thesis conclude the knowledge from the Master program, International Marketing and Brand Management Program 2012 and combine authors' special experiential using feeling of digital service. As the authors, both of them are Spotify's fans, we have experienced quite many functions from this digital service, therefore, we seek to contribute to the theoretical and practical knowledge and understanding of Consumer Involvement within this thesis.

We would like sincerely thank Veronika Tarnovskaya for her kind guidance and help as supervisor for this thesis. Besides, we would also want to thank Kayhan Tajeddini for his help with the SPSS statistic and analysis.

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# Table of Content

# 1. Introduction

*In this chapter, current trend of digital service will be introduced. Following this is the introduction of Internet as a platform of digital service.*

This thesis aims to research about how the factors of usability and sociability influence consumer involvement in digital service. Digital service is defined as any service delivered through digital boxes (Frederick, 2001). Based on the definition, the application of digital service is broad. For instance, withdrawing money from ATM can be called digital service. ATM is the "digital box", traditional service of withdrawing money is transferred into digital format and finally delivered to consumers through the "digital box". But the instance above are not what we are going to research about. We interest in the digital service that deliver through Internet portal. Internet carries hypertext and data stream (Sun & Demuynck, 2009) that offers a platform for digital service. Also, Internet is an important global communication tool (Diamond, 2004).

According to the statistic of International Telecommunication Union, one third of world population is covered by internet (itu.int, 2012-04-24). The influence of internet makes it an inevitable platform for digital service. Moreover, digital service delivered through Internet reflects how it meets consumers' needs along with the development of web technology. From Web 1.0 to Web 3.0 (Lassila & Hendler, 2007), digital service is transforming from passively delivering information to interactively co-producing information (Miura & Yamashita, 2007). This fits into the demand of personalization and interaction. The emergence of Web 3.0 enables personalization to a great extent. Application is deemed as a typical medium of digital service during this era (Hendler, 2009). Online digital music service is an example. Internet is the "digital box", play record is transferred into digital format and delivered through internet to the target consumers. Consumers can listen to music online without using a play record.

Along with the development of Internet, traditional service is transferred into digital format. For instance, traditional university library service is transferred into digital format and delivered through Internet portal. Universities which adopt digital library service aim to open a new channel for "resource sharing". By using online resource, students can easily download reference at home and share resource efficiently (Rogani, 2007).

Although digital services make traditional service more convenient, the future trend of digital service is not just a "digitizing" process. Meeting individual needs and desires is the trend of future digital services (Gubbins, 2011). According to Frame (1996), individual needs and desires have multi-layers. The highest level of need of individual is self-actualization. As to service, customers evaluate their self-actualization from two dimensions. First of all, the objective aspect which is derived from interactions with the product or service (i.e. service process) is defined as usability of digital services. Secondly, the relative subjective aspect which is derived from social interaction, personal characteristics and preferences are defined as sociability of digital

services (Ferguson et al, 2010). That is to say, if future digital services intend to satisfy consumer needs to the highest extent, the concentration should be put on both usability and sociability of digital services.

What service provider can expect from satisfying individual needs of consumers, "is to develop mutually beneficial long-term relationships that can benefit the provider by reducing costs (Berry, 1995; Reichheld & Teal, 1996), increasing profits (Reichheld & Sasser, 1990), generating positive word-of-mouth referrals (Beatty et al.,1996; Reynolds & Beatty, 1999), serving as a barrier to switching (Keaveney, 1995), and increasing the likelihood of action (Spake et al., 2003)." (Spake & Megehee, 2010:314)

To summarize, trend of digital services is to meet individual needs and desires. Individual needs reflect from usability (i.e. service interaction and experience) and sociability (i.e. personal value and social interaction) aspects where digital services should concentrate on. Internet is an indispensable platform for digital service where application becomes a form of service carrier with economic potential. Based on the trend, our curiosity about how consumers involve themselves into current digital services arises. How previous researches have approached this problem and what is our approach will be introduced in the next chapter.

# 2. Problem Formulation

*In this chapter, we will introduce how previous research have approached consumer involvement of digital services. Following this is the current research gap and our research question.*

Based on the trend, our curiosity about how usability and sociability influence consumer involvement arises. Based on the previous researches, we can see that usability and sociability's influence on consumer involvement have been researched respectively. Consumer involvement profile of digital service and relevant influential variables of usability have been worked out. Although there is no commonly accepted consumer involvement model for sociability, the influential variables of sociability have been indicated. In the following text, we will illustrate the current researches of consumer involvement of usability and sociability. By doing this, we will present the deficiency of current research gap and how this thesis will fix the deficiency.

## 2.1. Usability and Sociability as Factors of Consumer Involvement

Usability and sociability of digital service have been researched respectively for consumer involvement studies. According to Gabbott and Hogg (1999)"Consumer involvement, as a part of individual cognitive map influences his or her model of reality and gives form to his or her behavior in everyday situations." In consumer studies, involvement theory is used to reveal relevance of individual in terms of basic goals, values, and self-conception. By examining the relevant factors of consumer involvement, the degree of consumer involvement can be exhibited (Gyampah & White, 1993). Usability and sociability are researched as the "relevant factors" of consumer involvement in previous studies.

### 2.1.1. Usability's Influence on Consumer Involvement

Damodaran (1983) illustrated how to enhance consumer acceptance of digital service in a research of consumer involvement in digital services. Damodaran (1983) indicated that when consumers acquire knowledge of system function and designing process, they incline to accept the system better. Among the influential factors, technological knowledge, functionality, technical skills and practice are essentials to influence consumer involvement (Damodaran, 1983).

Rogani (2007) researched about consumer involvement and satisfaction in digital services. By examining the functional efficiency (i.e. efficiency of searching and easiness of categorization) of digital

services, Rogani concluded that consumer satisfaction and involvement are related with efficiency and usefulness of digital services. Similarly, Borgman (2000) states that digital service can influence consumer involvement by optimizing "(1) service; (2) architecture; (3) set of information resources, databases of text, numbers, graphics, sound and video etc.; and (4) set of tools and capabilities to locate, retrieve and utilize the information resources available."

From these studies we can see that consumer involvement researches of usability mainly focus on functional usability of digital services. Although Rogani looked into the emotional aspect (i.e. satisfaction) of usability, the emotional aspect is derived from usability. Thus, we conclude that consumer involvement is influenced by usability of digital service (i.e. efficiency, usefulness). Emotional involvement (i.e. satisfaction) is based on the research of usability. Since digital service begins to offer a platform for consumers to interact with each other online, it leads us to think about whether or not social interaction will influence consumer involvement of digital services; and to what extent will sociability influence consumer involvement.

### 2.1.2. Sociability's Influence on Consumer Involvement

Keenan and Shiri (2009) conducted a research of consumer involvement on Social Network Sites (SNS) (i.e. Facebook, Myspace). The research aims at finding out what encourages social interaction on SNS; and which kind of social activity will be implemented on SNS. It indicates that "social websites use a number of different approaches to encourage sociability among users. Facebook focuses on privacy and presenting 'real world' networks in online environment. Myspace promotes publicity and representing both real world and virtual networks in the Internet environment. Niche websites like LinkedIn and Twitter respectively focus on more specific aspects of community and technology." (Keenan & Shiri, 2009:438)

Moreover, Paulin and Bergeron (2010) indicate that personal interaction has a positive relation with consumer involvement. The research shows that consumer involvement is influenced by interactive intimacy, frequency and depth. According to Preece and Krichmar (2003), there is no commonly accepted framework for evaluating sociability of digital service. Instead, Preece and Krichmar developed a research structure for evaluating participatory extent of online communities and sociability by using three key principles – purpose, people and sociability.

From these researches, we can see that the influential variables of sociability (i.e. interaction, privacy peeking, interaction frequency and depth) have been indicated by previous researches. But a commonly accepted research structure of sociability is still missing due to the lack of common agreement.

## 2.2.Research Gap

Based on the current researches, we learnt that both usability and sociability have an influence on consumer involvement. But to what extent usability and sociability has contributed to consumer involvement is missing from current researches. Moreover, sociability is lack of a commonly agreed researching structure. Thus we conclude these two aspects as deficiencies.

### 2.2.1. Incomplete Comparison About Influence of Usability and Sociability on Consumer Involvement

Neither research of usability nor sociability has compared the influence on consumer involvement with each other. Since the development of digital service begins to offer social interactive function for consumers, the lack of comparison leads to a recognition gap when try to interpret consumer involvement of current digital services. That is why we need to look into the contribution of usability and sociability in consumer involvement. Understanding about the position can help to find out on which aspect should we improve in order to fit into the need of consumers. The missing comparison of how much usability and sociability has contributed to consumer involvement will hinder the understanding process and prevent us from knowing what to improve. For instance, based on current studies, we can interpret how sociability influences consumer involvement. But we cannot show the contribution of usability and sociability in consumer involvement. Winer (2009) indicated that the attribute of digital service shifts from solitarily functional service to interactive service. Nowadays researchers increasingly recognize that service as a kind of special product is influenced by cognitive aspect of consumers when they make purchasing decision (Gabbott & Hogg, 1999). Consumers' cognitive map and acceptance to service (Doll & Torkzadeh, 1990) are influenced by both usability and sociability. Thus the consumer involvement research in digital service should look into the influence of both usability and sociality aspects and figure out how they contribute to involvement; which contribution and importance they have as for consumer involvement studies (Gabbott & Hogg, 1999). Under the context of digital services with social function, deficiency in comparing usability and sociality will lead to an incomplete interpretation for consumer involvement (Rowley, 2004; Winer, 2009).

Based on this, the theoretical necessity of this thesis lies in that by examining from consumer involvement perspective, the nature and degree of contribution led by usability and sociability can be indicated. Based on this, how to improve consumer involvement will be indicated. For instance, if the sociability of digital service contributes less than usability while consumers expect much more on sociability, then the digital service should shift the focus to improve sociability to fit into the demand of consumers.

Moreover, the economic necessity of this thesis lies in that it offers an efficient way to improve digital service. Since the numeric extent of contribution of usability and sociability will be presented, digital service provider can find out on which aspect and to what extent the digital service should be improved. Instead of

interpreting the complex qualitative data, the concrete exhibition of influence and deficiency will make the process of improvement efficient. In the following part, we will illustrate the necessity of defining the researching structure of sociability.

### 2.2.2. Definition and Variables of Sociability are Incomplete

Compared with usability, the researches of sociability is immature and does not present a commonly accepted research model for studying consumer involvement in digital service. As it is stated in chapter 2.1.2, there is no admitted researching model of sociability. The model used to exhibit relationship between sociability and consumer involvement is borrowed from participatory theory. Participatory model exhibits the sociability's influence on involvement reflectively from three principles (purpose, people, sociability) instead of interpreting it directly. The lack of framework will lead to inaccurate interpretation about influence of sociability.

Moreover, due to the different specialization of researchers, without a commonly admitted researching model, relevant researching variables or aspects may be developed unequally. Some of variables will be developed further due to its familiarity with researchers. Influential variables such as "social feedback" may be underdeveloped due to its theoretical unfamiliarity. According to the definition of sociability, "Social feedback" is a necessary attribute. The underdevelopment of "Social feedback" may conceal the part of the involvement or perception of consumers when they interact with digital services.

Thus the necessities of this thesis lie in that it will develop a specific definition of sociability which is built up on previous theory and digital service background. This is an essential step on the wholly understanding of sociability. Since the digital service is distinguished from traditional service due to its feature of "digit", the anthropological definition of sociability needs to be adjusted when apply into digital background. By specifying the definition of sociability within digital context, a researching structure can be modified accordingly for investigating the influence of sociability. With the guidance of specified definition, it is possible to investigate the variables of sociability without ignoring influential variables.

## 2.3. Research Question and Purpose

**Research question of the thesis is:**

How the factors of usability and sociability influence consumer involvement in digital service.

**Research purpose:**

To exhibit the nature and degree of usability and sociability's influence on consumer involvement within digital service context.

# 3. Methodology

*This chapter will include our methodological reasoning and driven for choosing the methods, research philosophy, design, data collections and so forth.*

In this chapter, we argue for our methodological approach and reasoning. First, we will argue for the reason that why we choose Spotify as our representative example to illustrate this phenomenon. Second, we provide our own research mode which is made by gathering variables of Usability, Sociability and Consumer Involvement from previous and then by using those variables to investigate the correlation between sociality, usability and consumer involvement under the specific digital service context, furthermore we analysis research data from questionnaire to present influential scale of sociality and usability from different attributes separately. As those factors affected the research strategy, research design and data collection.

## 3.1.Research Philosophy

### 3.1.1. Epistemological considerations

The research question is aiming at discover the relationship between sociability, usability and consumer involvement. Positivism is perfect to study the social reality, which matches the purpose of our research. (Bryman & Bell, 2007) Because the basic reasoning of positivism assumes that the reality of objective exists in independent of human behavior, as well as Auguste Comte (1853) has mentioned that "all of the real knowledge is originated from human observation of objective reality" Meaning, subjective opinions from users' experience will be collected from the research method, and they are from subjective sensations, intuitions or reflections.

### 3.1.2. Ontological considerations

Bryman & Bell (2007) mentioned that objectivism asserts a social phenomenon and its meaning is to have an independent in existence of its social actors. In order to achieve the purpose of this research, objectivism has become the most proper evident ontological position. Therefore, by concluding the objectivist approaches given that the positivist implies greater dependence on social sciences and data collections, we are able to generalize the relations between sociability, usability and consumer involvement, which is under support of ontological position.

### 3.1.3. Empirical considerations

Since the aim of the research is to investigate the influence of sociability and usability towards consumer involvement and there are theories related within consumer involvement and two sides of functions of digital service. Hence, deductive empirical implies theory in order to reflect the using experience. The empirical nature of our research employs close to the deductive nature, so that the following deductive studies are used to test the hypothesis.

With the explanatory purpose of this research, deductive strategy and positivist objectivism, quantitative research is selected to conduct this research. This research method compared with qualitative can provide objective data rather than subjective words, theory testing on the hypothesis rather than theory generated or emergence, statistically analysis rather than narrative translation from the interviews, structured framework rather than creative methods, as well as macro rather than micro (Bryman & Bell, 2007). Therefore, we choose quantitative research as our research methodology (summarized in the table below)

| Methodological Research | Methodological choices |
|---|---|
| Research Nature | Quantitative Research |
| Research Purpose | Explanatory |
| Research philosophy | Positivist objectivism |
| Research strategy | Deductive |
| Research Design | Web-based questionnaire |

*Table 1. Summary of Methodological Research*

## 3.2.Research Strategy

To fill the research purpose and complete the theory gap, we will implement an exploratory study, as is used to be called from Kotler et al (2005: 345) that 'to gather preliminary information that will help to better define problems and suggest hypotheses'. Therefore, by solving this research problem, questionnaire can be well implemented for this descriptive research, which will be undertaken with using opinion and consumer attitude on the questionnaire, will enable us to interpret the different influence result between usability, sociability and consumer involvement (Saunders.M et al, 2007). Not surprisingly, questionnaire will be preferably designed as online survey, because Spotify is a powerful and trendy online digital service, in order to target the netizen who are also using Spotify and another reason because online questionnaire is one of the most widely used survey

data collection techniques, whose respondent is asked to answer the same set of questions so that it can provide an efficient way of collecting responses from a large sample prior to quantitative analysis (Saunders.M et al, 2007).

The approach we chose is to use Email which can offers more valid replies and comparatively broad and controllable. (Witmer et al, 1999) However, respondents to self-determined questionnaire are relatively unlikely to answer to be acceptable or because they have concern or more socially desirable which can influence them to give valid / subjective answer (Dillman, 2000).

# 3.3. Research Model

We will choose Spotify as our research object of digital service, because its fast development and powerful social influence in the online-music platform, which expanded 14 countries in 6 years and 2.5 million paying members by 2010. (Spotify, online resource from wikipeida) Moreover, its unique music interaction application and functions are more inclined to intrigue us to investigate the sociability and usability influence towards consumer involvement. Since application is the trend of future digital services, its usability includes listening to music and implementing music relevant activities, such as searching for album and sharing playlist. Additionally, Spotify's sociality includes the connection with Facebook. By logging on Spotify with Facebook account, users can connect with friends on social network website to share music. Users can also create communities to interact with people who share the same interest. Thus Spotify combines both usability and sociability attributes. In all, setting Spotify as a digital service example has theoretical relevance and economic significance.

In order to test the current consumer involvement, CIP model is adopted. An overall consumer involvement will be generated based on the five aspects "Interest", "Importance of perceived risk", "Probability of perceived risk", "Pleasure value" and "Symbolic value". Contribution of usability and sociability are examined respectively in order to generate their contribution to overall involvement.

Secondly, usability and sociability will be divided into detailed variables. Influence of relevant variables and influence of a group of variables will be evaluated. As to usability, "Accessibility", "Convenience" and "Participate extent" are main attributes. "Accessibility" includes understandability and operability of digital service. "Convenience" includes efficiency and flexibility of system. "Participate extent" includes frequency and depth of using.

As to sociability, "Personal trait", "Benefit" and "Social feedback" are main attributes. "Personal trait" includes identity and self-expression. "Benefit" includes interactive frequency and depth. "Social feedback" includes frequency and importance of feedback. To sum up, the research model can be concluded as Chart 3.3.1

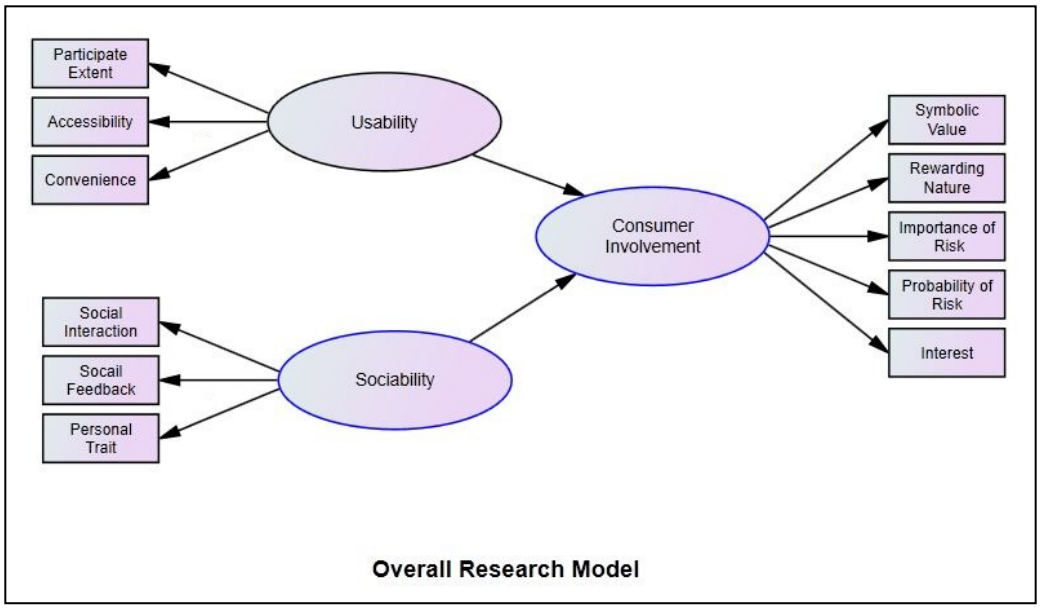



*Chart 3.3.1 Overall Research Model with pre-variables from previous researches*

# 3.4.Research Design

As it is said that a research design is a mean of providing a framework for collecting data and analysis based on the data. Taking the considerations of discussion about methodological research philosophy and strategy, we are using web-based survey, as the internet becomes an essential way of communication and the representative example 'Spotify' as the digital service for the research, which is also based on the internet, therefore, implementing web-based survey is of great necessity. If the survey is completed online and the responses are stored directly in an online database，it is much easier for statistical processing later. (Easterby et al, 2008)

The questionnaire will be designed based on the variables from the Stimuli definition model mentioned above, which are variables of 'Interest', 'Risk', 'Reward', representing Consumer Involvement; variables of 'Accessibility', 'Convenience', 'Participate Extent' standing for Usability; variables of 'Personal Trait', 'Benefit' and 'Social Feedback' standing for Sociability.

Questionnaire (showed in Table 2) is comprised by 14 questions which are designed to test 9 variables in total. Each variable is reflected by 1 or more individual questions. Firstly, filter question Q1 is assigned at the beginning of questionnaire in order to filter out non-user of Spotify. Q2 and Q3 are designed for collecting demographic (i.e. gender, age) data of interviewees. From Q4 - Q14 are designed to test each attributes. Following explanation will be interpreted from the Appendix-2 (Explanation of the Questionnaire)

# 3.5.Research method

In order to achieve the research aim, we will implement three research methods on SPSS. First, factor analysis will be used to reduce irrelevant variables in order to get

## 3.5.1. Factor Analysis

The aim of factor analysis is to simplify, to make order out of chaos, by identifying basic underlying factors that explain a large number of other related variables in a parsimonious way. (Burn.R, 2008)
In our case, Explanatory Factor Analysis (EFA) will be chosen, for the reason that it can help reduce data sets by comprising a large number of variables into a smaller number of factors and thereby identify the underlying factor structure or model (Burn.R, 2008) ,therefore we will use EFA to test the 56 variables we have used in the research model if they are highly related variables for our research purpose.

## 3.5.2. Reliability Analysis

Based Bryman & Bell (2007), the importance and influence that preoccupations of quantitative resaerch are aspect of measurement, causality, generalization and replication. High reliability can generate high consistency and stability to be replicated for every occasion that is employed. (Easterby-Smith, 2008).Stability means how stable a measure is used over times, which is important to be awared in order to establish if the results from a measure can fluctuate or not. (Bryman & Bell, 2007)

Internal consistency method is frequently used to determine a scales' reliablity by assessing the commonness of a set of items that measure a particular construct. (Burn.R, 2008) Moreover, cronbach's alpha is commonly employed to test the internal reliability. The high score of the coefficient prove high consistency and stability.

## 3.5.3. Regression and ANOVA

Since we want to investigate the influence between Usability, Sociability and Consumer Involvement, in order to get the scale or the result of how much influence each of them towards Consumer Involvement, regression analysis will be chosen. It can permit predictions and seek relationships between variable by setting the dependent variable and independent variable.(Burn.R, 2008) However, during the regression analysis, good and bad estimate will be predicted, it can be poor one if the correlation between the predictor variable and the criterion variable is low. (Burn. R, 2008) ANOVA provides a statistical test which can examine whether the means of several groups are all equal. *T*-test generated to more than two groups from ANOVA can help our

research to judge our hypotheses. (Burn.R, 2008) Therefore, we hope the best of our knowledge and data collection will help minimize the negative predictions.

# 4. Theoretical Background

*In this chapter, the consumer orientation of digital service will be introduced firstly. Secondly, variables which are used for evaluating the influence of usability and sociability are selected.*
*Hypotheses are given based on the research structure.*

## 4.1. Digital Service Shifts to Consumer Orientation

With the development of internet technology, digital service follows the trend of becoming consumer oriented. In the last decade of 20th century, development of Web 1.0 only allows the website owners to manipulate the information or text displayed (Handsfield et al, 2009). Contemporary digital services are delivered through hyper-linked content (Sun & Demuynck, 2009). Consumers are not entitled to edit the information and hardly can get in touch with websites owner. The rare communication between consumers and websites owner is delivered through content. Due to the lack of feedback, influence of consumers is deemed as less important than service provider. According to Handsfield et al (2009), during Web 1.0 era, the way to enhance communication efficiency and consumer involvement is to concentrate on effective content.

When it comes to Web 2.0 era, consumers are enabled to create, edit, manipulate and collaborate online. Users are not only consumers but also producers of content (Handsfield et al, 2009). Video, image, audio, various forms of information are delivered through Web 2.0. With this development, consumers can interact with service provider and express their demand freely. Multi-channel communication enables consumer to maximize their voice and influence. Moreover, digital services with social interactive function step on the stage. For instance, personal social websites such as Facebook, Myspace are built up for exhibiting personal information and offering a social interactive platform for consumers (Miura & Yamashita, 2007). Beside the actual usability of websites as a platform to present information, social interaction and collective intelligence add new opportunities to engage consumers effectively. Sharing content and interacting with communities are examples of digital social activities. By now, social interaction is involved into digital services. Social effect and feedback also become as the inevitable aspect of consumer involvement (Murugesan, 2007). Social interaction is not only a method of online entertainment but also a source of consumer unity. Consumers are united by the openness of internet which makes them more social, cultural and powerful in decision (Proulx, 2009). The power shift underlines that the unity of consumers make their opinion indispensable when offering digital services.

During the era of Web 3.0, consumer orientation is even more reiterated. Enabled by technology, consumers become more independent from digital service provider and even be able to satisfy their own demand by personalization. Web 3.0 was proposed in 2006 which indicates that storage of large scale data in public database and overcoming constraint of browser become possible (Lassila & Hendler, 2007). Digital service in Web 3.0 era will enable users to develop or personalize portable web applications on their own account (Hendler, 2009). Instead of browser, application may become the potential platform to deliver digital service. And consumers may turn into the producer who caters their need of digital service due to the personal control of service platform - application. This trend is predictable since the development of application shows its economic potential as a digital service platform. According to the research of IT Business Edge, "Application market in worldwide was $1.7 billion in 2009. During the first six months of 2010, the market reached $2.2 billion. Likewise, the number of downloaded applications jumped to 3.9 billion in the first six months of 2010 from 3.1 billion during all of 2009 (itbusinessedge.com, 2012-04-11)."

In all, due to the power shift from service itself to consumer orientation, the question of how consumers perceive service and how they have been influenced by digital service become the hot topic of consumer studies. Since the developed technology enables digital service to offer both usable and social service to consumers, the involvement related with usability and sociability comes to the frontier of researches of digital service. Usability and sociability are researched in combination with consumer involvement. This leads us to think about whether or not the current research structure is still compatible with the fast development of digital service and the new concerning which has not been considered before (i.e. social interaction). Nowadays researchers faced with a dilemma of whether or not to disregard the current conceptual model and exploring a new one in order to fit into the changes of digital service. Studies which have integrated consumer involvement with usability and sociability post a solution to this dilemma. In the following chapter, current studies of consumer involvement in digital service will be introduced.

## 4.2. Consumer Involvement of Digital Service

Consumer involvement theory (Kapferer & Laurent, 1986) has been researched for more than 30 years. In 1980s, in order to avoid single scale researching method on consumer involvement, Kapferer (1986) developed Consumer Involvement Profile (CIP) theory to map out a multidimensional scale of involvement study.

Previous researching instruction of consumer involvement often boils down to a single scale (Vaughn, 1980) or to a single-item measure of perceived importance (Laurent & Kapferer, 1985:47; Agostini 1978; Hupfer and Gardner 1971; Lastovicka and Bonfield 1982; Traylor 1981). Researchers uphold the single-scale measurement assume that there is a sequent relation between product-consumer involvement. That is so say, by using qualitative or quantitative research method, researchers can observe a linear relation between product and

consumer involvement. In a later research, Kapferer and Laurent (1986) opposed the direct sequence conception by introducing CIP theory. CIP suggests that "Involvement could stem from one or from a combination of the five antecedents. The five antecedents include:

1) Interest
2) Perceived risk which is divided into
   a) Importance of risk
   b) Probability of risk
3) Rewarding nature of the product, such as the pleasure value of product
4) Product's ability to express one's status, one's personality, or identity (symbolic value)

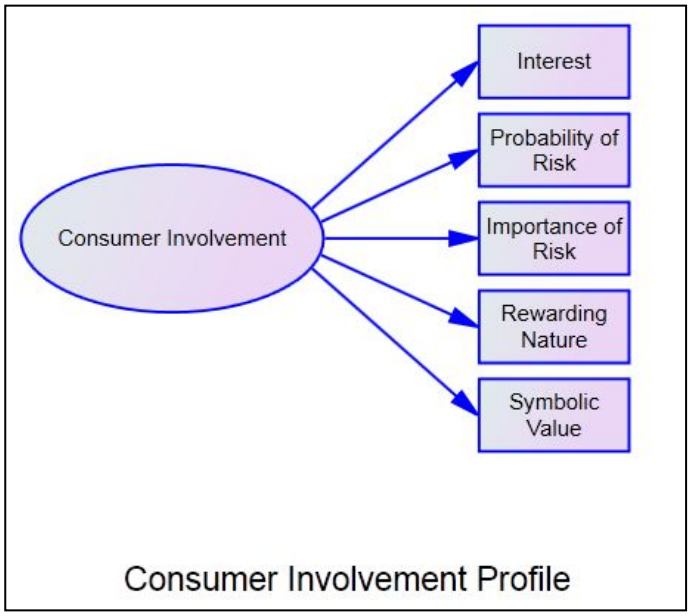



*Chart 3.1.1 Consumer Involvement Profile*

These five antecedents (showed in Figure 3.1.1) mediate the effects of a number of variables on involvement." (Kapferer & Laurent, 1986:49) CIP is designed for consumer involvement researching in advertising and marketing. Gabbott and Hogg (1999) transferred CIP theory into digital service involvement area and introduced "social risk" concept. Gabbott and Hogg (1999) proposed that compared with traditional product, digital service is special since it involves personal contact during the purchasing procedure. Moreover, service is riskier than traditional product since it is "intangible" and "experiential". That means, before making purchasing decision on traditional product, consumer can make trial or consult experienced opinion to relief risky feeling. But when it comes to service, due to the "intangibility" of service, consumer need to experience personally and then evaluate whether or not the experience has met with expectation. Since the experience is imposed personally, it increases the feeling of risk.

Furthermore, since social interaction is involved into service, it becomes another origin of the "risky" feeling. For instance, surgery service may expose current condition or secret of consumers to public. The exposure may jeopardize consumer's social image. Thus, before making decisions, consumers need to consider the social consequence and be careful with privacy protection.

In all, digital service as a distinctive class of product comprise both objective function for usage and subjective function for social interaction. Compared with traditional services, these two aspects of usage may all lead to consumer involvement. When we try to explain which factor has contributed to consumer involvement, barely saying the origin is usability or sociability is too general to sense. So when the origin of involvement is boiled down to variables such as "efficiency" or "social interaction", it becomes easier to find out the answer of where does the consumer involvement come from. Thus, in the next chapter, the definition and relevant variables of usability and sociability will be introduced for the purpose of finding out how usability and sociability influences consumer involvement.

# 4.3.Usability and Sociability of Digital Service

As to the research of consumer involvement in digital service, Frederick (2011) pointed out that nowadays researchers tend to use CIP to develop solitary attribute into more detailed aspects. The researching structure of usability and sociability is based on constantly developing influential factors.

## 4.3.1. Definition of Usability and Sociability

The objective aspect of service is to deliver value experience to consumer through the interactions between consumer and service. As to the subjective aspects of digital service, it is derived from emotional effect such as social interaction, personal characteristics and preferences (Ferguson et al, 2010). When transfer this definition into digital context, Koohang and Ondracek (2005) define the objective aspect of digital service as usability. "Usability is generally characterized as the determining aspect of a system's capability to satisfy the needs and specifications of users. Usability is a degree to which users easily and effectively use a system. It plays a significant role in user acceptance of a system" (Dumas & Redish, 1993; Guillemette, 1989; Holms, 2002; Nielsen, 1993; Nielsen, 2000; Rosenbaum, 1989; Rubin, 1994; Shackel, 1991; Koohang & Ondracek, 2005:408).

As to the subjective aspect of digital services, sociability is worthy to be researched about due to its intensive influence on consumer involvement. According to Ferguson et al (2010), positive social interaction is correlated with trust (Bergeron et al., 2003; Gremler et al., 2001), service quality (Parasuraman et al., 1988), satisfaction (Anderson, 1998; Reichheld & Sasser, 1990), value (Hartline & Jones, 1996), surprise (Derbaix & Vanhamme, 2003), relationship appraisal (Johnson et al., 2003), relationship quality (Boles et al., 1997), and

purchase intentions (Crocker, 1986). All of these sentiments construct consumer's emotional perception of digital services.

Stated by Bevir (2010:83), "Sociability is generally understood as a natural and rational desire for human community and fellowship that has played an ontological and foundational role in accounts of society. It is often depicted as a feature of human nature, a normative command of god or of reason and as a corollary of self-love. In general, sociability is understood as the desire of individuals to live peacefully in society with one another and to take a general interest in the well-being of others." Keenan and Shiri (2009) defined sociability as the ability of people to interact or socialize with others. These two definitions describe the connotation of digital services in an anthropological context. Since the context of this thesis is digital service, we integrate the definition with digital background and define sociality of digital service as "the desire and ability of individuals to interact with one another in digit based society" (self-owned definition). After clarifying the definition of usability and sociability, the relevant variables will be selected to build up a researching model for this thesis.

## 4.3.2. Variables of Usability

Usability as a dimension of digital service is integrated as a conglomerate of various influential factors. Newell et al (2011) conducted a consumer involvement research in digital system designing. This research focuses on testing the functional "efficiency" of system and showed that the "Rewarding nature" consumer involvement is positively related with "Accessibility" and "Efficiency" of system. "Cooperative activity" like involving consumer into program designation gives consumers the feeling of "leadership" and "control" which is related to the "Symbolic value" of consumer involvement.

In a similar research of involvement in digital system, Damodaran (1983) detailed the reason why consumers feel satisfied with involving into the system designation procedure. That is, by influencing factors such as "knowledge", "technical skills", service provider make consumers participate into the construction procedure and make them technical veterans. Law et al (2007) integrate the "knowledge" and "technical skill" in a category called "learnability". Furthermore, "learnability" is integrated into "Accessibility" (Koohang & Ondracek, 2005) and together with "Convenience" and "Participate extent", the three factors are used to test the usability of digital services (McGill & Klobas, 2008).

As to research about usability of digital services, McGill and Klobas (2008) gave out a set of relevant variables for investigation. The variables include Accessibility, Convenience and Participate extent. Since the set of variables are used for evaluating physical usability of digital services, Koohang and Ondracek (2005) divided the variables into more details and introduced subjective aspects which is related with usability. "Usability is generally characterized as the determining aspect of a system's capability to satisfy the needs and specifications of consumers. Effectiveness, learnability and flexibility, error handling, user understandability and operability and user efficiency are parameters to judge usability. Subjective attributes of usability include

consumer attitude (Shackle, 1991); satisfaction (ISO 9241-11, 1998; Nielsen, 1993); and view of product attractiveness (ISO/IEC 9126, 1991)." The influence on consumer involvement which has been imposed by usability can be expressed in the following structure:

1) Accessibility: Understandability
2) Convenience: Flexibility
3) Participate Extent: Time an frequency

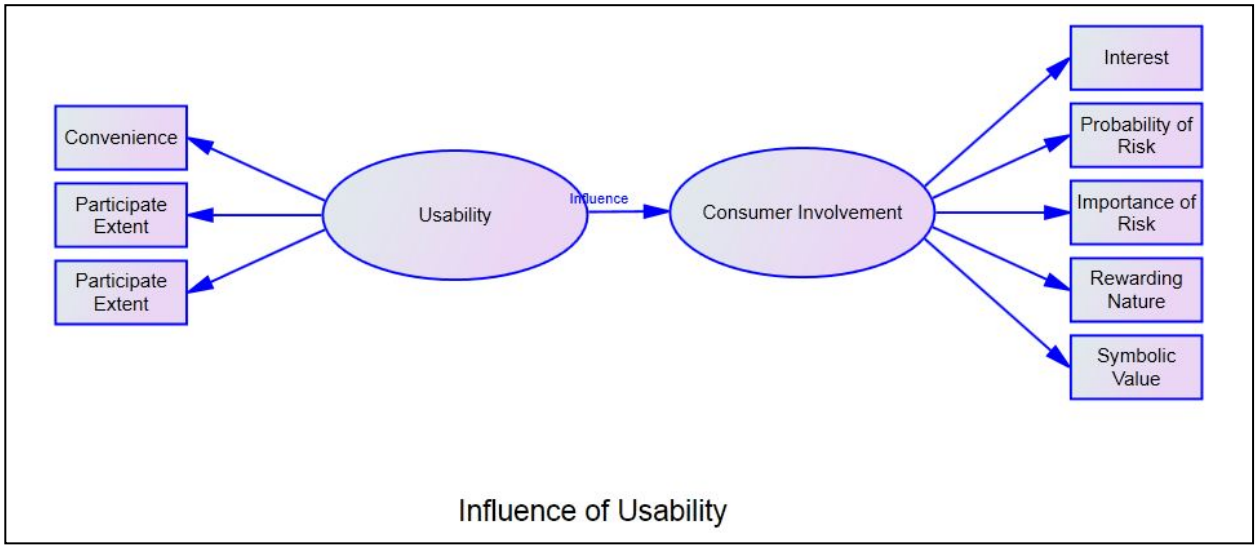



*Chart 4.3.2 Research Model-2: Influence of Usability*

Based on the structure of influence, we hypothesize:

Hypotheses 1a: Each variable of usability does not influence consumer involvement

Hypotheses 1b: Each variable of usability influences consumer involvement

## 4.3.3. Variables of Sociability

"Sharing content" is a form of digital service for blog product and SNS product. In a blog publishing research of Miura and Yamashita, it is indicated that the "Rewarding nature" of high involvement in blog using are "sharing content" and "positive social feedback" (Miura & Yamashita, 2007).

Moreover, Keenan and Shiri (2009) proposed that the "rewarding nature" of sharing content is detailed into the desire of peeking into "privacy". Researchers not only study "sharing content" from a "Rewarding nature" perspective, but also add "social risk" aspect into the involvement structure of "content sharing". Chowdhury et al (2010) indicated that due to the ambiguity of online environment, "content sharing" has been equipped with "restrict" and "filter" function to avoid people who are not frequently "interacted" or "distant" from interactive circle to see. "Content sharing", like a dual edge sword, should be considered as an attribute to enhance consumer involvement in Social Network Site but also as the risk of incurring anxiety. The controversy

of "content sharing" is interesting since it can bring feeling of reward to consumers as well as hurt their feeling of security. This leads us to think about the reason why consumers perceive "content sharing" in different ways. From the statement of Chowdhury et al (2010), we found out the reason.

According to Chowdhury et al (2010), consumers have a knowledge base of social relationship. In the knowledge base, attributes such as Trust, Distance in relations and Frequency of interactions will influence the perception of social relationship (Chowdhury et al, 2010). Based on this we can see that consumers judge their feeling of security and intimacy of social relationship by evaluating the attributed mentioned above. As it is mentioned above, digital service will bring consumers the feeling of pleasure as well as the feeling of risk. Thus, the question of which factor will bring the feeling of pleasure and which factor will bring the feeling of risk arises.

Individuals perceive greater benefits from high degree of interaction. Interaction frequency, Depth and width of interaction are related with interest and pleasure value (Kinard & Capella, 2006:360; De Wulf et al., 2001; Pressey & Mathews, 2000). According to Marjorie (2006), individuals tend to obtain power and influence on objects through sociality. In verse, social identity of individuals will be constantly modified throughout sociality. During the back-and-forth procedure, Miura and Yamashita (2007) proposed to look into both internal and external factors. Miura and Yamashita also demonstrated that consumer not only passively received information but also engaged themselves into a mutual communication process. The process includes sharing knowledge, personal life and interests online (Miura & Yamashita, 2007). Some digital services involve the conception of "friend" (Chowdhury et al, 2010) and the interactive mechanism. Under this circumstance, consumers face with personal security risk led by sharing content (Chowdhury et al, 2010). In all, combine the model offered by Miura & Yamashita and the participatory principle of offered by Preece and Krichmar (2003), variables of sociability that influences consumer involvement are presented in the following structure (showed in Figure 3.2.2):

1) Personal Traits
2) Social Interaction
3) Social feedback (Miura & Yamashita, 2007: 1455; Paulin & Bergeron, 2010)

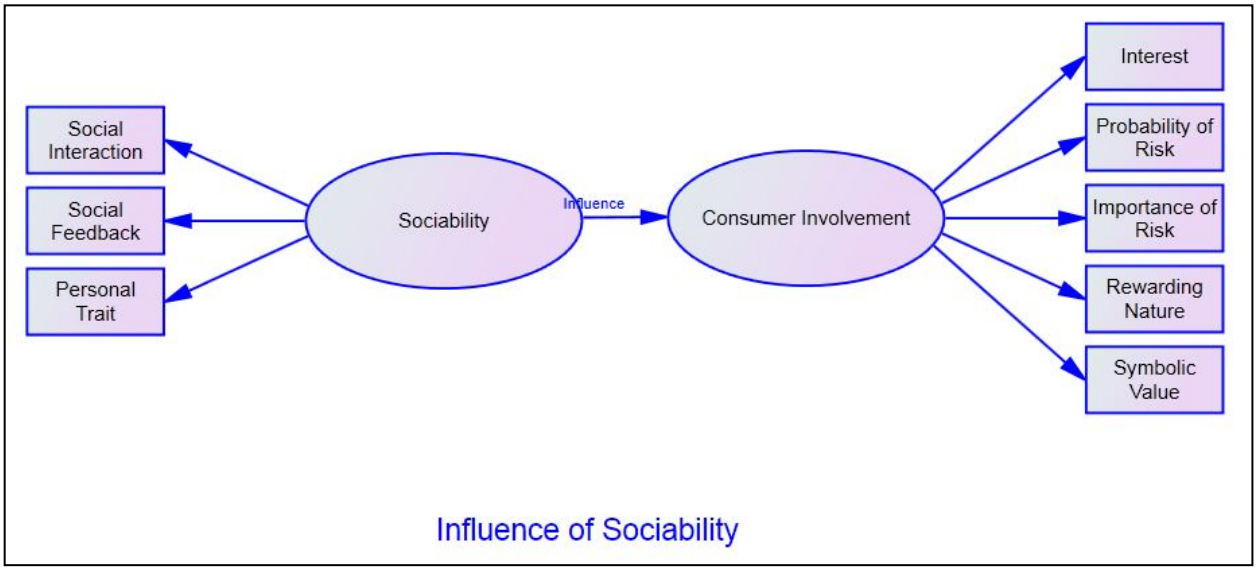



*Chart 4.3.3 Research Model-1: Influence of Sociability*

Based on the structure, we hypothesize:

Hypotheses 2a: Each variable of sociability does not influence consumer involvement

Hypotheses 2b: Each variable of sociability influences consumer involvement

# 4.4.Conglomerate Influence

Since this thesis aims to examine how the factors of usability and sociability influence consumer involvement, based on the model of influence, we are going to achieve this through examining two main pairs of influence:

1) Pair 1: Influence of Usability on Consumer involvement

2) Pair 2: Influence of Sociability on Consumer involvement

Since consumer involvement contains 5 attributes, usability and sociability contains 3 attributes each, we will examine the influence of usability and sociability based on each attributes. The attributes and related variables will be presented in the designation of questionnaire.

# 5. Findings and Analysis

*In this chapter, the general result of data will be presented in the first part. Following this, hypothesis will be tested. Statistical indexes will be exhibited to show the existed relationship. Corresponding analysis will be conducted based on the data.*

## 5.1 Consumer Profile

219 samples took part in this consumer involvement research, 203 of interviewees are current users of Spotify which represents the valid results. 37.9% of the participants are female and 54.3% are male.

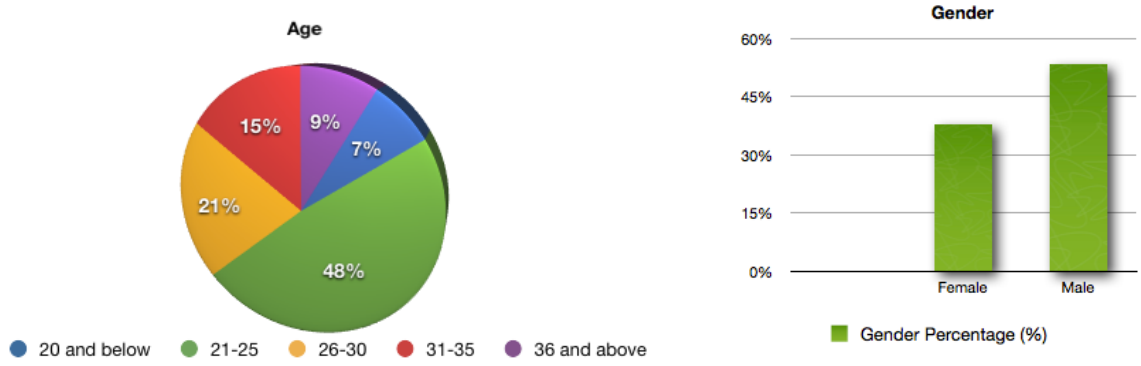



*Chart 5.1.1 General information of Spotify Users*

According to Chart 5.1.1, the average age of samples is 24.5. 52.1% of consumer use Spotify because of their "friends using it", 47.5% consumer use Spotify because it "synchronizing with Facebook account", This means that it is inevitable to connect with Spotify while they are using Facebook. "Recommendation" and "Music Service System" are the third and forth reason for using Spotify. From this we can see that the connection with social net work website contributed most of consumer of Spotify. As a music service provider as Spotify is, "Music Service" only accounts for the third reason of using.

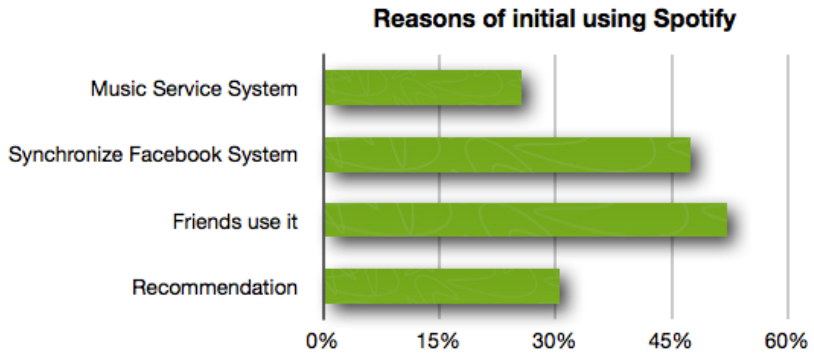



*Chart 5.1.2 Motivation of using Spotify*

Furthermore, in order to know consumer's experience in using Spotify, we investigate the scale of satisfaction of functions on Spotify by asking Q5, which is 5-scale questions of satisfaction from 'Very dissatisfaction' to 'Very satisfaction'. We mainly conclude three major scales to interpret, because the mentality of Swedish respondents is intentionally avoiding the extreme negative answers (Marañon, 2011). Therefore, according to Chart 5.1.3, we could discover that professional users of Spotify are from age 21-25 almost satisfying all of the functions, except with obvious dissatisfaction of "Function Understability". On the contrary, users with +36 age rated low on 'music choice', meaning the options of music on Spotify are not completely targeted all of the users.

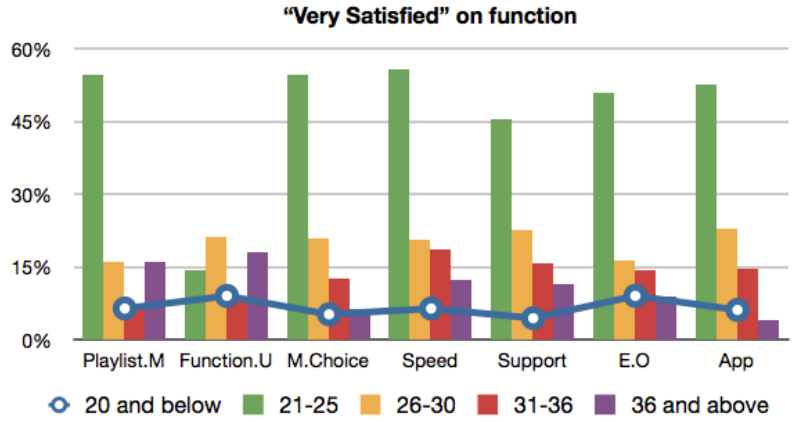
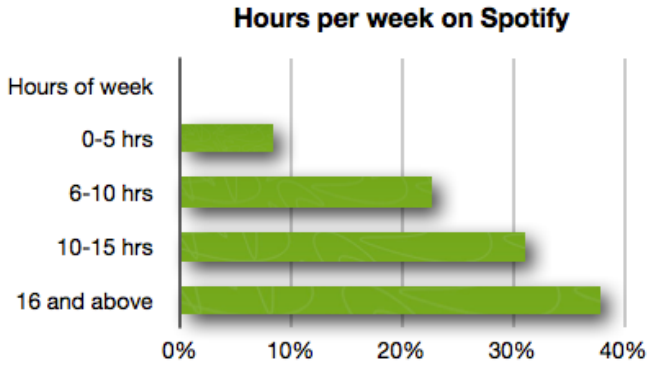



*Chart 5.1.3 Level of satisfaction on functions on Spotify*

There are two questions for investigating participate extent and interest of using Spotify. From the chart 5.1.4, we can interpret that 37.9% of users tend to set Spotify as their first choice of music player. The average hours of using Spotify per week is more than 16 hours. That is to say, the majority of respondents are quite savvy in using Spotify.



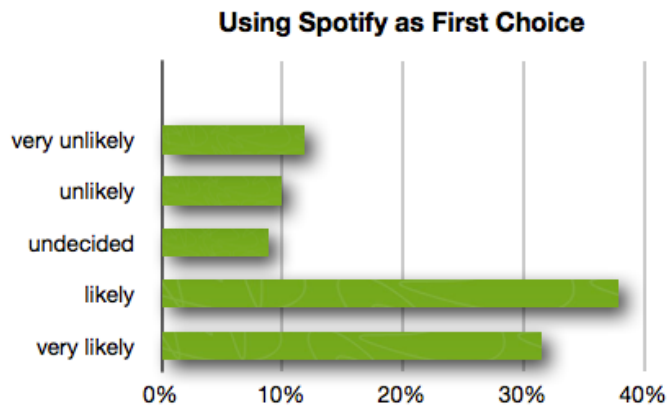



*Chart 5.1.4 Interest in using Spotify and Participate Extent*

# 5.2 Factor Analysis

According to Table 2 in Chapter 4, we have 56 variables in total. In order to ensure the analytical accuracy, Factor Analysis is adopted to reduce the variables and categorize them into different groups. After reducing the variables, we get a model of Factors (see Appendix) with a value of KMO =0.615 > 0.6, sig = 0.000 < 0.05. It means that the reduced variables fit for the future analysis. In this model, 29 variables are selected in total. In Chart 5.2.1 we can see that Factor 1 is featured as enjoyment of using Spotify. This feature belongs to the "Rewarding Nature" of Consumer Involvement. Factor 2 is featured as the easiness to access Spotify which belongs to the "Accessibility" of Usability. And Factor 3 is featured as the importance and frequency of peeking others' privacy online. According to Keenan & Shiri, (2009), peeking privacy is defined as a way of seeking social interaction. Factor 4, 5, 6 are featured as social interaction which is implemented by means of "share", "suggest" and "subscribe". Together with Factor 3, we categorize Factor 3, 4, 5, 6 into "Interaction" of sociability. The characterized of these factors is to describe the consumer who take initiative to seek social interaction. Factor 7 has two features: 1) how does consumer adjust their social images when they are aware of that other users can see their behavior; 2) how does Spotify express consumers' personality. Factor 7 is related with consumer's social identify, it belongs to the "symbolic value" of Consumer Involvement. Factor 8 is featured as the feedback that is obtained from the social interaction, which belongs to "Interaction" of Sociability. Factor 9 is featured as the easiness to manage playlist and to understand how to use. Factor 9 belongs to "Convenience" of Usability.

*Chart 5.2.1 Factor Analysis Results*

| ***No.*** | ***Factor*** | ***Variables*** | | | | |
|---|---|---|---|---|---|---|
| *1* | *Rewarding nature* | Enjoyment-application | Enjoyment-playlist management | Enjoyment-share | Enjoyment-music listening | Enjoyment-feedback |
| *2* | *Accessibility* | Support on devices | Application | Stream speed | Be shared-importance | Easiness to Operate |
| *3* | *Interaction-Peeking* | Peeking-frequency | Peeking-Importance | | | |
| *4* | *Interaction-Share* | Share-Importance | Share-Frequency | | | |
| *5* | *Interaction-suggest* | Suggest-importance | Suggest –frequency | | | |
| *6* | *Interaction-Subscribe* | Subscribe-frequency | Subscribe-importance | | | |
| *7* | *Symbolic Value* | Adjust social image | Express personality | | | |
| *8* | *Feedback* | Be shared frequency | Be shared occurrence | | | |
| *9* | *Convenience* | Understandability | Playlist management | | | |

In all, Factor Analysis has allocated the 29 variables in to 9 factor. Factor 1 and Factor 2 contain 5 variables respectively. From Factor 3 to Factor 9, each factor has two variables. Based on the pre-defined variables, we name the 9 Factors as “Rewarding nature”, “Accessibility”, “Interaction-Peeking”, “Interaction-Suggest”, “Interaction-Subscribe”, “Symbolic Value”, “Feedback” and “Convenience”. Since the attributes of usability, sociability and consumer involvement have been reduced, we reconstruct the researching model as below:

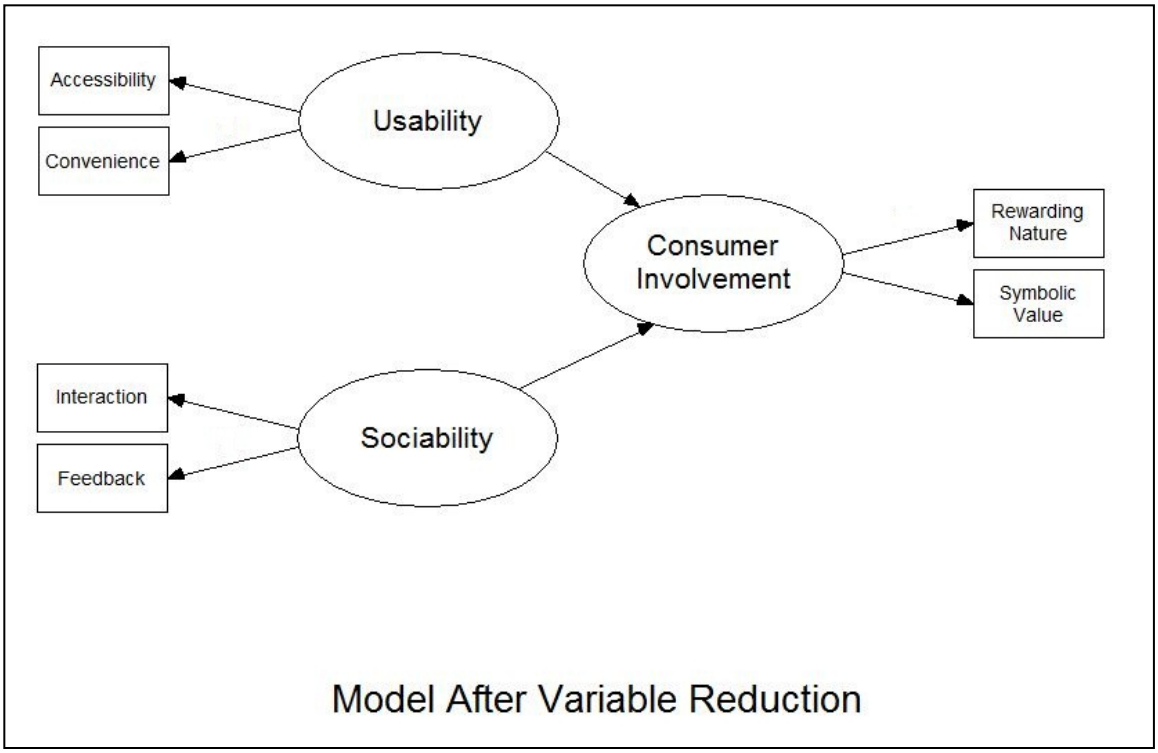



*Chart 5.2 Research Model modified after Factor Analysis*

Compared with the original Research Model (see Chapter 3), we found that 5 following pre-variables are reduced, the "Participate Extent" of usability; "Probability of Risk", "Importance of Risk" and "Interest" of consumer involvement; "Personal Trait" of sociability. Then, based on the reduced model, we will examine four pairs of influence:

Pair 1:Usability's influence on "Rewarding Nature" of Consumer Involvement

Pair 2:Usability's influence on "Symbolic Value" of Consumer Involvement

Pair 3:Sociability's influence on "Rewarding Nature" of Consumer Involvement

Pair 4:Sociability's influence on "Symbolic Value" of Consumer Involvement

# 5.3 Reliability Analysis

After data collection and factor analysis, we have concluded 9 factor groups would adjust for our research model. Since Nunnally (1978) has mentioned that the coefficient alphas would be recommended better to exceed the 0.70 level, then it indicates high consistency and stability that enables our findings to be replicated. (Burns. R, 2008) However, from some of the coefficient alpha results we collected from reliability were less than 0.70. Meaning, those variables with a reliability of + 0.70 is surely better than those who with less than 0.70. A number of factors may influence the reliability of any test, for our situation, different results can be

resulted from various conditions(Burn.R, 2008), for instance respondents resources are varied and their attitudes of answering the questionnaires.

Referring to Table 5.3.2, we can conclude that two factors of Consumer Involvement are well consistent for the analysis, because the coefficient alphas of Rewarding Nature with 0.775 and coefficient alphas of Symbolic Value with 0.722. Then we look at four variables of Sociability, which are Interaction of Peeking with a high coefficient alpha value 0.970, Interaction of Share with a high coefficient alpha value 0.981, Social Suggest with a high coefficient alpha value 0.978 and Feedback with a good coefficient alpha value 0.897. For the last two variables of Usability, the coefficient alpha value of Convenience is quite good with 0.707, however, the coefficient alpha value of Accessibility is not that pleasant with 0.533.

| *Table 5.3.2* |
|---|
| **Reliability analysis for multi-item scales** |
| Item, Reliability coefficients (Cronbach's Coefficient alpha) |
| ***Consumer Involvement-Rewarding Nature (N of items=5, α=0.775)*** |
| Enjoyment-application |
| Enjoyment-playlist management |
| Enjoyment-Share |
| Enjoyment-music listening |
| Enjoyment-feedback |
| ***Usability-convenience (N of items=5, α=0.707)*** |
| Support on device |
| Be shared-importance |
| Stream speed |
| Application |
| Easiness to use |
| ***Sociability-Interaction of Peeking (N of items=3, α=0.970)*** |
| Peeking-frequency |
| Peeking-importance |
| Peeking=origin-subscribe |
| ***Sociability-Interaction of Share (N of items=2, α=0.981)*** |
| Share-importance |

| |
|---|
| Share-frequency |
| ***Sociability-Social Suggest (N of items=2, α=0.978)*** |
| Suggest-importance |
| Suggest-frequency |
| ***Consumer Involvement-Symbolic Value (N of items=2, α=0.722)*** |
| Adjust social image |
| Express personality |
| ***Sociability-Feedback (N of items=2, α=0.897)*** |
| Be shared-frequency |
| Be shared-occurrence |
| **Usability-Accessibility (N of items=2, α=0.533)** |
| Functional understandability |
| Playlist Management |

# 5.4 Influence of Usability on Consumer Involvement

Hypotheses 1a: Usability does not influence consumer involvement

Hypotheses 1b: Usability influences consumer involvement

## 5.4.1 Hypotheses Testing

Based on the reduced research model, we found that usability contains two factors, one is "Accessibility" and the other one is "Convenience". Consumer involvement contains two factors, one is "Symbolic value", the other one is "Rewarding nature". In order to prove the existence of influence of usability, we examined the relationship between the usability and two factors of consumer involvement with ANOVA analysis. When the confident level is 95%, we reject the null hypothesis when significant value < 0.05. According to the result, we found that the significant value between usability and "symbolic value" is sig= 0.038 < 0.05; the significant value between usability and "rewarding nature" is sig = 0.000 < 0.05. Then we reject the null hypotheses and concluded that usability has influence on the "symbolic value" and "rewarding nature" of consumer involvement.

### 5.4.2 Influence of Usability On Symbolic Value

*Table 5.4.2 Regression between Usability and Symbolic Value*

| Model | Standardized Coefficients | t | Sig |
|---|---|---|---|
| | Beta | | |
| (Constant) | | 3,407 | ,001 |
| stream speed | ,112 | 1,399 | ,163 |
| support on devices | -,090 | -,951 | ,343 |
| application | ,205 | 2,557 | ,011 |
| be shared-importance | ,024 | ,277 | ,782 |
| easiness to operate | ,021 | ,270 | ,788 |
| playlist management | -,040 | -,515 | ,607 |
| functional understandability | ,092 | 1,208 | ,229 |

In order to find out the nature and degree of influence, we calculated the regression value between usability and symbolic value. In the following diagram (Appendix xx), we can see that "Application" as a variable of usability has a positive linear relationship of regression with symbolic value. The value of Beta = 0.205 which means that when the usage of application increase 1, consumers' perception of symbolic value will increase 0.205. The rest variables of usability do not show a significant linear relationship of regression with symbolic value.

By examining the feature of application on Spotify, we found that the applications can be categorized into two columns. One column mainly focuses on recommending and categorizing music for users in order to make the process of finding music easier and interesting. This group includes but does not limit the applications which categorizes the various genera of music.

The other one column mainly focuses on offering social interactive opportunity for users to find out peers who share the same interest. By using this kind of application, users can listen to music simultaneously with friends or find out the nearest users who are listening to the same music at that moment. As it is showed in the result, the application has a positive linear relation with consumer involvement. We interpret that applications offered by Spotify share a similarity in usage that is to help consumers to express their personal value through music listening and social interaction. For instance, by using the application, consumers can find out the music that fit into their self-identity (Cleveland et al, 2011) and social image. Consumers can reflect their personality through using the music listening service and post-service experience (Workman & Studak, 2005). This will lead to an enhancement on the recognition of consistency between application-using and self-recognition. During the interaction between Spotify and self-recognition, consumers build up their own identity

through music listening and project that identify back to the feature of music. The more successful the projection is, the more consistent the symbolic value can be reflected by service of application.

As to social interactive application, consumers build up their social identity through the interaction with counterparts. Since the application is designed for finding out similar users, firstly consumer recognize their own identity by retrieving the previous self-cognition (Hogg et al, 1999). By using the social application, consumers find out other users who share the similar interest and interact with them to obtain socially extended-self (Ahuvia, 2005). Throughout the interactive process, consumers' perception of self-extension flows back and forth between consumer themselves and interactive counterparts. Consumers' self-recognition and self-perception is modified constantly throughout the process. Moreover, consumers adjust their self-image in order to fit into their perceived social image. The more intensive adjustment is, the deeper recognition (Lin et al, 2012) that Spotify has imposed on consumers.

### 5.4.3 Influence of Usability On Rewarding Nature

***Table 5.4.3 Regression between Usability and Rewarding Nature***

| Model | Standardized Coefficients | t | Sig |
|---|---|---|---|
| | Beta | | |
| (Constant) | | 12,438 | ,000 |
| stream speed | -,085 | -1,128 | ,261 |
| support on devices | -,069 | -,775 | ,439 |
| application | -,109 | -1,438 | ,152 |
| be shared-importance | -,057 | -,715 | ,476 |
| easiness to operate | -,111 | -1,524 | ,129 |
| playlist management | -,229 | -3,139 | ,002 |
| functional understandability | ,006 | ,079 | ,937 |

In order to find out how usability influences the rewarding nature of consumer involvement, we implemented regression analysis between them. Usability is set as independent variable and rewarding nature is set as dependent variable. From the table above we can see that significant value of "playlist management" = 0.000. It represents that the null hypothesis can be rejected. There exists a relationship of regression between usability and rewarding nature. The value of Beta is -0.229 which means that if the usage of playlist management increase 1, consumers' feeling of reward increase -0.229. The rest variables of usability do not exhibit a significant linear relationship of regression with rewarding nature. Since it shows a negative incremental relationship between playlist management and rewarding nature, we interpret this as the more usage of playlist management, the less feeling of rewarding.

As to Spotify, playlist refers to the list of music that consumer has chosen. The information of music will be arranged into a list which can be exhibited on the interface of Spotify. By managing the music information list, users can select or delete or move the music into an order they prefer. Moreover, the playlist can also be published by users who wants to share music with others. The music playlist is managed by consumer themselves. Depending on the different involvement of user and the different quantity of music, the playlist can contain many or less music choices, easy to manage or complex to manage. Since the perception of easiness or difficulty of playlist management depends on consumers' technological maturity (Mey, 1996), consumers who are technologically mature perceive more easiness than the less mature consumers when managing the playlist. Therefore, playlist of each Spotify users are varied by their technique skills and scale of interest in using Spotify.

According to Kim (2005), rewarding nature is related with the feeling of pleasure and hedonism. If handling the playlist management decreases the happiness or pleasure of using Spotify, then we interpret that playlist management requires a high maturity of technological knowledge of consumers, and the average technological knowledge of consumers cannot meet the requirement. The stress which is incurred by lack of ability to handle playlist management jeopardizes the feeling of pleasure and rewarding. In the case of Spotify, we can see that the rewarding nature of digital service is influenced by consumers' maturity of technological knowledge. Less pleasure feedback or stress is incurred by the lack of ability or knowledge when handling the difficult system of digital services. The stress jeopardizes the enjoyment and pleasure of using digital service.

# 5.5 Influence of Sociability On Consumer Involvement

Hypotheses 2a: Sociability does not influence consumer involvement

Hypotheses 2b: Sociability influences consumer involvement

## 5.5.1 Hypotheses Testing

Based on the reduced research model, we found that sociability contains two factors, one is "Interaction" and the other one is "Feedback". Consumer involvement contains two factors, one is "Symbolic value", the other one is "Rewarding nature". In order to prove that sociability influences consumer involvement, we examined the relationship between sociability and the two factors of consumer involvement with ANOVA analysis. When the confidence level is 95%, we reject the null hypotheses when sig < 0.05. According to the result of ANOVA, we found that the significant value between the influence of sociability and "rewarding nature" is 0.042 < 0.05; We proved that sociability of Spotify influences the "Rewarding nature" of consumer involvement. However, the significant value of influence between sociability and "symbolic value" is 0.534 > 0.05, we cannot prove

that sociability influences the "Symbolic Value" of consumer involvement. Thus in the following analysis, we will implement regression analysis only between sociability and rewarding nature to see the degree of influence.

### 5.5.2 Regression Between Sociability and Rewarding Nature

When sociability is set as independent variable and rewarding nature is set as dependent variable, we get the diagram as below:

***Table 5.5.2 Regression between Sociability and Rewarding Nature***

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1,932 | ,302 | | 6,406 | ,000 |
| | peeking-frequency | -,098 | ,112 | -,185 | -,869 | ,386 |
| | peeking-importance | ,097 | ,121 | ,170 | ,799 | ,425 |
| | share-frequency | ,044 | ,128 | ,091 | ,345 | ,731 |
| | share-importance | -,092 | ,133 | -,181 | -,694 | ,489 |
| | suggest-frequency | -,310 | ,137 | -,560 | -2,266 | ,025 |
| | suggest-importance | ,292 | ,133 | ,537 | 2,188 | ,030 |
| | be shared-frequency | -,163 | ,065 | -,366 | -2,495 | ,013 |
| | subscribe-frequency | -,048 | ,065 | -,098 | -,745 | ,457 |
| | subscribe-importance | -,019 | ,086 | -,029 | -,222 | ,824 |
| | be shared-occurrence | ,528 | ,206 | ,372 | 2,564 | ,011 |

In the case of Spotify, "suggest importance" and "suggest frequency" means how important and how frequent does "giving out suggestion to others" mean to consumers. The suggestions that have been given out include but not limited to music suggestion, singer suggestion, playlist suggestion and etc. Both importance and frequency of suggestions represent the initiative interaction of consumers. That is to say, consumers take initiative to interact with other users by means of giving out suggestion through Spotify.

Base on the Table 5.5.2 we can see that "suggest frequency" shows a negative relationship of regression with "rewarding nature". The value of Beta is -0.560 which means that when the frequency of giving out suggestion increase 1, the feeling of rewarding will decrease 0.560. "Importance of suggestion" has a positive relationship of regression with rewarding nature. The value of Beta is 0.537 which means that when consumers' perception about the importance of giving out suggestion increase 1, the feeling of rewarding will increase 0.537. That is to say, consumers will get more feeling of rewarding if the suggestion gaining increasingly importance to them. But if the suggestion is giving out frequently, it will jeopardize the feeling of rewarding. In another word, the importance of intention of seeking social interaction will enhance the feeling of pleasure, but

actually taking initiative to interact with other users on Spotify will decrease the feeling of rewarding. We interpret this result as "the consumers who have positive intention to influence others people through interaction feel reluctant to take initiative". According to Chen et al (2012), the intention to influence of consumers show their need to satisfy self-fulfillment. Giving out suggestion to influence others users' preference can make consumers feel being recognized by social environment. The improvement of consistency between self-recognition and social recognition will result in an improved stickiness to product or service (Ang & Wight, 2009). By acknowledging this, we can interpret that the increased intention of giving out suggestions represent consumers' need of self-fulfillment. The cognition of fulfillment leads to a improvement on feeling of being rewarded. But due to the "social risk" and "trust emergency" which have been proposed by Keenan and Shiri (2009), consumers feel reluctant to take initiative to make intention into actual action. What hinders them to do is the uncertainty about perceived social risk. Thus, the need of being recognized and self-fulfillment drive the emergence of intention of taking initiative to interact, but the uncertainty about perceived social risk hinders consumer to take action.

"Be shared-frequency" and "Be shared-occurrence" represent how frequent the content has been shared by other users; and the perceived quantity of occurrence of being shared by others. The content that will be shared by others include but does not limit to music, playlist and etc. The action of "be shared" represents the negative social interaction on Spotify. That is to say, consumers who has been shared by other users are negatively involved into the social interaction process instead of positively taking initiative to seek interaction. "Be shared frequency" shows a negative relationship of regression with "rewarding nature". The value of Beta is -0.366 which represents that if the frequency of being shared increase 1, the feeling of reward will decrease 0.366. "Be shared occurrence" shows a positive linear relationship of regression with "rewarding nature". The value of Beta is 0.372 which means that if the quantity of occurrence of being share increase 1, the feeling of reward will increase 0.372. That is to say, frequently being shared by other consumers will jeopardize the feeling of rewarding, but the perceived quantity of occurrence of being shared will improve the feeling of pleasure. Compared with the analysis of "suggestion", we find similarity in interpretation the two pairs of regression . Since "frequency" represent the perception of an action that being implemented, "occurrence" represents consumers' perception about quantity of being shared, "importance" represents consumers' perception of importance of one action, "consumers who feel reluctant to act" may project the emotion into answering the questions. By making assumption about this, we can interpret the reason why the variable that describes an actual action tends to be loaded with negative value while the variables that describe an perceived action tends to be loaded with a positive value. In all, we conclude that consumers have positive intention of interaction with other users through Spotify, but they feel reluctant to take initiative to act. The perceived uncertainty of social risk hinder consumers from making actual social interaction.

## 5.6 Comparison of Influence of Usability and Sociability on Consumer Involvement

Based on the regression analysis, we can see that usability shows a significant relationship of regression with two factors (rewarding nature, symbolic value) of consumer involvement. Sociability shows significant relationship of regression with one factor (rewarding nature) of consumer involvement. From this point of view, we interpret that the scope of influence led by usability is wider than the influence led by sociability. But when we look into the variance of consumer involvement made by per unit of sociability and usability, we can see that the absolute value of the significant Beta generated by usability is less than 0.300 (i.e. $|-0.229| < 0.300$, $|0.205| < 0.300$); the absolute value of significant Beta generated by sociability is larger than 0.300 (i.e. $|-0.560| > 0.300$, $|0.537| > 0.300$, $|-0.366| > 0.300$, $|0.372| > 0.3$). Meaning the scale of influence from sociability is deeper than the scale of influence from usability.

As we stated in the theoretical background, usability will lead to both objective and subjective influence on consumer involvement. Both of the objective and subjective influence are led by consumers' perception about the usage or functionality of digital service. The relationship between consumer and digital service contains the emotional aspect of consumer involvement (i.e. satisfaction about digital service) but not the human emotional focus (i.e. interpersonal rejection, psychological hurt, hostility) (Cassidy et al, 2009). That is to say, consumers may feel satisfied or dissatisfied about the digital service, but it is less possible for consumers to build up an emotion towards digital service like they build up an emotion towards human beings. As to the involvement of sociability, consumers build up interpersonal relationship through the social interactive function of digital service. Thus the human emotional focus (i.e. interpersonal rejection, hurts, hostility) may exist between interactive counterparts. According to Cassidy et al (2009), once consumers perceive the human emotional fluctuation of rejection or hurt, the influence tends to last long in consumers psychological condition and possess deep post-influence in consumers' psychological and physical behavior. Based on this, we have the following interpretation. First of all, through the interaction with digital service, consumer build up both human emotional relation and consumer involvement. Since the usability of digital service is involved throughout the interaction between consumers and digital service, it is possible for usability to influence consumer involvement in a general and broad scope. When it comes to the sociality, consumes obtain the human emotional fluctuation (i.e. interpersonal rejection, hurt) through personal interaction. Since the influence of human emotion lasts long in psychological condition and possesses a deep post-influence, it is possible for sociability to influence consumer in a deeper extent.

# 6. Conclusion

In all, our research question is how usability and sociability influences consumer involvement in digital service. Based on previous research and the feature of our research subject Spotify, we selected 56 variables and integrate the variables into electronic questionnaire. The questionnaire is distributed through Email, online survey website. After the result collection, total response is 219, valid questionnaire is 203. In order to ensure accuracy of analysis, we used Factor analysis to reduce irrelevant variables. The original 56 variables are reduced to 29 variables which have been categorized into 9 factors. Based on the attribute of each factor, we allocate the 9 factors into 6 attributes: "Accessibility" and "Convenience" which belongs to usability; "Social feedback" and "Social interaction" which belongs to sociability; "Rewarding nature" and "Symbolic value" which belongs to consumer involvement. The reliability of the factor has been proved by Reliability analysis. Moreover, ANOVA is selected to test hypotheses, Regression analysis is selected to calculate the influence of usability and sociability.

## 6.1 Usability's Influence on Consumer Involvement

First of all, we successfully rejected the null hypotheses and proved that usability and sociability have influence on consumer involvement. Usability influences "Rewarding nature" and "Symbolic value" of consumer involvement. "Accessibility" of usability has a significant linear regression relationship with consumers' symbolic value. As to the interaction between consumer and digital service, consumers build up their perception about how the service can express their indent through post-service experience. If the post service experience fit into previous self-recognition, consumers tend to cultivate positive perception about the ability of digital service to build up symbolic value.

"Convenience" of usability has a significant relationship of regression with consumer involvement. We interpret this as due to the requirement of technological maturity of digital service, less mature consumer feel stressful when faced with the complex system of digital service. The stressful feeling will jeopardize the rewarding nature of consumer involvement.

In all, personalized digital service which fit into consumers' self-recognition will enhance consumer involvement, especially in the aspect of symbolic value. Difficulty of handling digital service should be regulated with the average technological maturity of consumers in case of jeopardizing the rewarding nature of consumer involvement.

## 6.2 Sociability's Influence on Consumer Involvement

Sociability shows significant influence on rewarding nature of consumer involvement. Importance of social interaction and feedback will lead to an enhancement on consumer involvement. We interpret this as positive intention to interact with other users through digital service. Desire of being recognized by others contributes to the intention of interaction which will increase feeling of rewarding.

Due to the perceived uncertainty of social risk, constantly involving into social interaction will jeopardize the feeling of pleasure and rewarding. Thus, although consumers have the positive intention to interact with other users through digital service, they feel reluctant to take initiative take action due to the perceived uncertainty of social risk.

## 6.3 Comparison of Usability and Sociability's Influence on Consumer Involvement

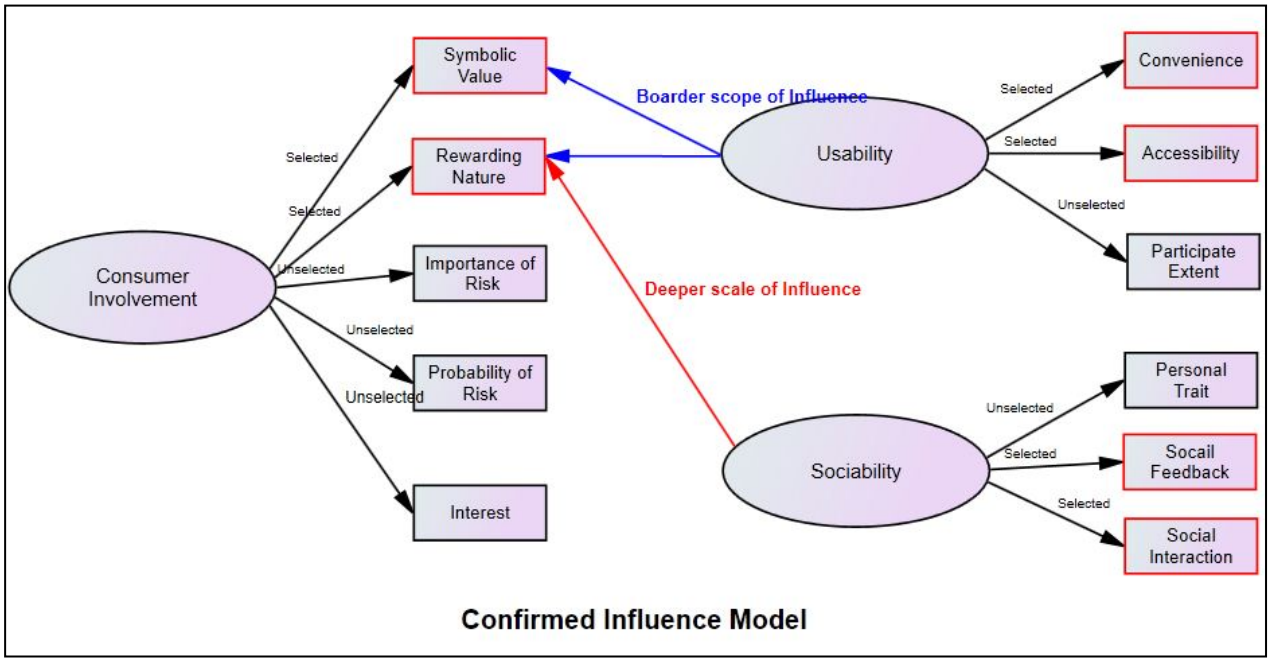



*Chart 6.3 Confirmed Influence Model*

Based on the comparison of absolute value of influence of usability and sociability, we found that usability has a boarder scope of influence towards on consumer involvement; and sociability has a deeper scale of influence on consumer involvement. Since usability is involved throughout the interaction between consumers and digital services, it is possible for usability to have a broader influence on consumer involvement. Moreover, consumers

build up human emotional relationship between interactive counterparts through sociability. The interpersonal emotional fluctuation may lead long term and deep psychological influence on consumers. Thus it is possible for sociability to influence consumer involvement in a deeper extent.

## 6.4.Implication of Result

Based on the result, we concluded three aspects of implication. First of all, digital service needs to fit into individual needs in order to enhance the consistency between consumer's pre-service expectation and post-service evaluation. The method to achieve this is to personalize service. Moreover, consumer will adjust their self-identity through social interaction with other counterparts. It also requires the consistency between expectation of interaction and post-interaction experience. This means that the digital service should have the ability to attract desirable counterparts for consumers to interact with. Finally, digital service provider can improve general consumer involvement by ameliorating the usability of digital services. If service providers want to influence consumers in a deeper level, the focus should be put on social interactive function of digital service. It is important to notice that negative interpersonal feedback may incur long term human emotional hurt, thus service provider may try to maintain a positive environment for social interaction.

As it is showed in the Overall Influence Model, "Participate extent", "Interest", "Risk", and "Personal trait" have been filtered out by factor analysis in this research. The influence of usability and sociability mainly focuses on "Rewarding nature" and "Symbolic value" of consumer involvement. From this point of view, we imply that consumers prefer to choose the digital service which fit into their self-recognition. High degree of personalization is a method to fit into individual need. Moreover, consumers judge the digital service through the feedback of post-service experience. The post-service experience is obtained from the comparison pre-service perception and poser-service perception. That is to say, consumers will judge the service based on their expectation about outcome. If the outcome meets their expectation, they tend to feel satisfied about the service. The post-service experience tends to be perceived as positive (Grace & Cass, 2004). Consumers' recognition about digital service will be enhanced by the consistency between pre-service expectation and post-service experience. Since the need of consumer may change, it requires the service provider to adjust digital service constantly in order to obtain the consistent perception of service experience.

Since the digital service with a social interactive function offers a platform for consumers to interact with each other. Consumers' self identity will be adjusted constantly throughout the process of social interaction. The adjustment will be projected onto digital service and feedback to consumers again. During the back and forth process of feedback, consumers re-modify their self-recognition, their counterparts' identity and the identity of digital services. That is to say, the consistence between perception of digital service and consumer's self-recognition is one aspects of symbolic value. The feedback from interactive counterpart is another resource of feedback. This requires digital service to first all fit into consumer' self-cognition by personalization; and

secondly make sure that consumer that have been attracted share some similarities. This posts a higher requirement of orientation on digital services. Since the image of digital service must be clear enough to attract the desired consumers, in verse, consumers requires the digital service to attract more similar counterparts to be interacted with. Finally, the most optimum situation for digital service provider is to create a positive social environment for consumers to interact. Precaution for avoiding or regulating negative social feedback is recommended if digital service provider wants to maintain a positive social environment. For instance, in order to maintain the positive social interactive environment, service provider may build up some proper mechanisms for content censorship.

In all, since the relation between usability, sociability and consumer involvement is applicable for digitals service that have social interactive function, the findings of this thesis will contribute to the development of this kind of digital services. It gives the managerial level a practical and applicable implication of how to analyze the situation when faced with the complex involvement of consumers. The reluctance of social interaction is especially interesting since it presents a real situation in digital service market. Moreover, it implies an doable way for manager level to alleviate consumers' dilemma of social interaction on digital services.

# 7. Limitation and Future Research

As it is mentioned in the Introduction part, “digital box” is a service that deliver through Internet portal. Our research only did fus on the representative digital service, Spotify, though the realm of digital service is a broad topic. Our research has contributed a research model which is investigating the relationship between Usability, Sociability and Consumer Involvement. Other digital device can be applied to the similar research model, but with minor adjustment of the uniqueness of the digital service. From our study, it is also meaningful for the future digital application provider to take great consideration of the easiness of function perspective so that it could increase social interaction among consumer users with a flexible ability and simple knowledge of using its function. Thereby, other internet device would be also fit with this research topic and it may lead to different result based on the different function and purpose of the digital device. This suggest that the results from our study could be as an example of conclusion of different influence between usability, sociability and consumer involvement for the future researchers.

Due to the need for the respondents that should experience of using Spotify, we decided to survey with most of Swedish users and part of International students who are studying in Sweden, meaning they are aware of this digital service and have general using experience of Spotify. Even though our study had this perspective, we could not conclude that our survey and research method could generate the full influence of usability and sociability, for the reason of Spotify is accessed within 14 countries, which means the users from those 14 countries will have different opinions towards feeling of using and share different cultural sociality theories. Thereby, it could also be argued that our findings are limited to the context of swedish users. It would be interesting to see differences among 14 countries which Spotify current has approached if the research would have been allowed more time and more resources and support from Spotify company.

As we have discussed in the implication of result, we believe that it would be interesting to examine more relevant variables representing the three factors, which are Usability, Sociability and Consumer Involvement. Since, our valid pre-designed 59 variables after factor analysis are reduced to the number of 29 variables, it would be more interesting to see that if we could have more relevant variables to test the influences. For example, the policy and experience of premium member would be an very interesting topic to examine how it would influence the relationship between consumer involvement and usability, sociability. This could interest future researcher to design further study of

the influence of consumer involvement with combining “by invitation only” topic.

In all, our research contributed to consumer involvement studies with the conclusion of different variables of usability, sociability from previous researches and made a comparison of different influence based on those variables between usability, sociability and consumer involvement. It would allow the future researcher to add more relevant variables based on the model we created to examine more influence that could make on consumer involvement. Reviewing the literature and contributions we have made, our study is well conducted and worthy.

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# Appendix

## 1. Questionnaire: Consumer Involvement of Spotify

**Q1** Are you a current Spotify user?

1) Yes 2) No

If No Is Selected, Then Skip To End of Survey

Answer If Are you a current Spotify user? Yes Is Selected

**Q2** Your gender is

1) Female 2) Male

**Q3** Your age is

1) 20 and below
2) 21-25
3) 26-30
4) 31-35
5) 36 and above

**Q4** Why do you begin to use Spotify?

1) Music Service
2) Connect with Facebook
3) Friends use it
4) Recommend by friend
5) Others _____

**Q5** Please describe your feeling about Spotify's functions.

| | Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied |
|---|---|---|---|---|---|
| Playlist management (1) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Functional understandability (2) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Music choices (3) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Streaming speed (4) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Support on various devices (5) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Easiness of Operation (6) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Embedded Application (7) | ❍ | ❍ | ❍ | ❍ | ❍ |

**Q6** How many hours do you use Spotify per week?

1) 0-5 hours
2) 6-10 hours
3) 11-15 hours
4) 16 hours and above

**Q7** Spotify is the First choice of application for listening to music.

1) Very Likely
2) Likely
3) Undecided
4) Unlikely
5) Very Unlikely

**Q8** When your playlist can be seen by friends,

| | Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| does the playlist express your personality? (1) | ❍ | ❍ | ❍ | ❍ | ❍ |
| will you adjust playlist to fit into you social image? (2) | ❍ | ❍ | ❍ | ❍ | ❍ |

**Q9** Will you seek interaction with people on Spotiy?

1) Definitely not will
2) Probably not will
3) Don't know
4) Probably will
5) Definitely will

**Q10** Social feedback on Spotify?

| | Frequency | | | | | Importance | | | | | Occurence | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Seldom ly | Occasioanly | Sometimes | Of ten | Very often | Very important | Impo rtant | Neutural | Less impor tant | Not importa nt | Yes | N o |
| Shared by others (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Recommended by others (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Subscribed by others (3) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

**Q11** Your Interactions on Spotify

| | Occurence | | Frequency | | | | | Importance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | No | Seldomly | Occasionaly | Sometimes | Often | Always | Not important | Less Important | Neutural | Important | Very Important |
| Subscribe friend's playlist (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Exchange music with friend (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Send new findings to friend (3) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Pay attention on what friends are listening to (4) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

**Q12** If there is something wrong with Spotify,

| | where it probably comes from | | | | | which problem is important to you | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Very Impoosible | Impossible | Neutral | Possible | Very Possible | Very Important | Important | Neutral | Less Important | Not Important |
| Music listening (1) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Share (2) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Subscribe (3) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Playlist management (4) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Embedded Application (5) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |
| Feedback from others (6) | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ | ❍ |

**Q13** How much enjoyness does the following part give you?

| | Very Happy | Happy | Neither Happy nor Unhappy | Unhappy | Very Unhappy |
|---|---|---|---|---|---|
| Feedback from others (1) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Music Listening (2) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Subscribe (3) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Playlist Management (4) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Share (5) | ❍ | ❍ | ❍ | ❍ | ❍ |
| Embedded Application (6) | ❍ | ❍ | ❍ | ❍ | ❍ |

**Q14** If Spotify is a friend of you, how you describe the personality of this friend.

1) Just like me
2) Quite a lot like me
3) Somewhat like me
4) Not much like me
5) Not at all like me

## 2. Explanation of the Questionnaire

| Consumer Involvement of Spotify | | |
|---|---|---|
| **No. of Question** | **Aim of Question** | **Tested Attribute** |
| Q1 | Filter non-user | non |
| Q2 | Geographic data (i.e. age and gender) | |
| Q3 | | |
| Q4 | Motivation of using | Op1-usability/ Op2-4sociability |
| Q5a | Involvement in Usability | Convenience |
| Q5b | | Understandability |
| Q5c | | Efficiency |
| Q5d | | Efficiency |
| Q5e | | Flexibility |
| Q5f | | Operatability |
| Q5g | | Convenience |
| Q6 | Time spent on using | Participate Extent |
| Q7 | Spotify as 1st choice | Interest |
| Q8a | Self-expression | Symbolic value |
| Q8b | social image adjustement | Social identity |
| Q9 | Initiative | Social interaction |
| Q10a1 | Social feedback-Be shared | Occurrence |
| Q10a2 | | Frequency |
| Q10a3 | | Importance |
| Q10b1 | Social feedback-Be recommended | Occurrence |
| Q10b2 | | Frequency |
| Q10b3 | | Importance |
| Q10c1 | Social feedback-Be subscribed | Occurrence |
| Q10c2 | | Frequency |
| Q10c3 | | Importance |
| Q11a1 | Social interaction-Sbscribe | Occurrence |
| Q11a2 | | Frequency |
| Q11a3 | | Importance |
| Q11b1 | Social interaction-Share | Occurrence |
| Q11b2 | | Frequency |
| Q11b3 | | Importance |
| Q11c1 | Social interaction-Suggestion | Occurrence |
| Q11c2 | | Frequency |
| Q11c3 | | Importance |
| Q11d1 | Social interaction-Peek at privacy | Occurrence |
| Q11d2 | | Frequency |
| Q11d3 | | Importance |
| Q12a1 | Risk of Usability | Probability |
| Q12a2 | | Importance |
| Q12b1 | Risk of Sociability | Probability |
| Q12b2 | | Importance |
| Q12c1 | Risk of Sociability | Probability |
| Q12c2 | | Importance |
| Q12d1 | Risk of Usability | Probability |
| Q12d2 | | Importance |
| Q12e1 | Risk of Usability | Probability |
| Q12e2 | | Importance |
| Q12f1 | Risk of Sociability | Probability |
| Q12f2 | | Importance |
| Q13a | Rewarding nature | From Sociability |
| Q13b | | From Usability |
| Q13c | | From Sociability |
| Q13d | | From Usability |
| Q13e | | From Sociability |
| Q13f | | From Usability |
| Q14 | Consistancy with self-cognition | Symbolic value |

# 3. Factor Analysis

**Rotated Component Matrix[a]**

| | Component | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | CI-RN | US | IP | IS | SS | SV | FE | BE | AC |
| Enjoyness--application | .754 | -.170 | .030 | -.041 | -.078 | .067 | .015 | -.072 | -.022 |
| Enjoyness-playlist management | .728 | -.265 | .009 | -.102 | -.049 | -.032 | .040 | -.038 | .060 |
| Enjoyness-share | .710 | -.047 | .036 | -.064 | .012 | -.006 | -.009 | -.003 | -.264 |
| Enjoyness-music listening | .649 | -.015 | -.070 | -.070 | .097 | -.135 | -.072 | -.094 | -.096 |
| Enjoyness-feedback | .640 | -.025 | -.005 | .071 | -.042 | -.117 | .006 | .060 | -.042 |
| Spotify as 1st choice | -.426 | .393 | -.060 | .030 | -.008 | .323 | .009 | -.039 | .179 |
| hours per week | -.413 | .357 | -.169 | -.189 | -.037 | .275 | .043 | .067 | -.141 |
| support on devices | -.140 | .810 | .021 | -.102 | .047 | -.066 | -.002 | -.055 | .038 |
| be shared-importance | -.072 | .737 | .142 | -.063 | -.015 | -.074 | -.073 | .178 | -.111 |
| stream speed | -.131 | .554 | -.153 | .135 | -.035 | .187 | .059 | -.167 | .189 |
| application | -.176 | .527 | -.039 | .078 | .085 | .220 | -.021 | -.016 | .305 |
| easiness to use | -.155 | .527 | .021 | .070 | -.015 | .129 | .337 | -.088 | .123 |
| problem importance-share | -.247 | -.325 | -.055 | .001 | -.322 | .282 | .064 | -.068 | -.230 |
| peeking-frequency | -.003 | .058 | .937 | -.141 | -.001 | -.036 | -.058 | -.088 | .035 |
| peeking-importance | .021 | .059 | .926 | -.116 | -.052 | .020 | -.054 | -.100 | .004 |
| problem origin-subscribe | -.006 | -.089 | .483 | .223 | .019 | -.052 | .015 | .159 | -.166 |
| share-importance | -.059 | .009 | -.041 | .974 | .023 | -.029 | -.040 | .005 | .000 |
| share-frequency | -.065 | .005 | -.045 | .968 | .013 | -.035 | -.041 | -.002 | .013 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| suggest-importance | -.007 | .008 | -.029 | .005 | .972 | .070 | .040 | -.028 | -.032 |
| suggest-frequency | -.066 | .008 | -.024 | .034 | .964 | .066 | .059 | -.045 | .007 |
| adjust social image | -.071 | .071 | -.075 | -.033 | -.032 | .829 | -.044 | .001 | .099 |
| express personality | -.063 | .018 | .094 | -.033 | .092 | .817 | .071 | .019 | .014 |
| seek interaction | -.238 | .276 | -.298 | .002 | .208 | .441 | -.087 | .054 | .031 |
| be shared-frequency | -.028 | .114 | -.064 | -.036 | .054 | .026 | .964 | .022 | .032 |
| be shared-occurence | .027 | -.055 | -.025 | -.056 | .033 | -.036 | .934 | .080 | -.020 |
| subscribe-importance | -.051 | -.024 | -.033 | .036 | -.019 | -.008 | .000 | .952 | .030 |
| subscribe-frequency | -.069 | -.015 | -.026 | -.027 | -.038 | .045 | .088 | .930 | .048 |
| functional understandbility | -.038 | .089 | -.055 | .053 | -.028 | .124 | -.036 | -.008 | .824 |
| playlist management | -.299 | .136 | -.034 | -.078 | .025 | -.030 | .090 | .105 | .685 |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

# 4. Reliability Analysis

## Reliability: Symbolic Value of Consumer Involvement

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 203 | 92,7 |
| | Excluded[a] | 16 | 7,3 |
| | Total | 219 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,722 | ,723 | 2 |

**Inter-Item Correlation Matrix**

| | adjust social image | express personality |
|---|---|---|
| adjust social image | 1,000 | ,566 |
| express personality | ,566 | 1,000 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance |
|---|---|---|---|---|---|---|
| Item Variances | 1,675 | 1,613 | 1,737 | ,124 | 1,077 | ,008 |
| Inter-Item Correlations | ,566 | ,566 | ,566 | ,000 | 1,000 | ,000 |

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 529,645 | 202 | 2,622 | | |
| | Between Items | 10,406 | 1 | 10,406 | 14,291 | ,000 |
| Within People | Residual | 147,094 | 202 | ,728 | | |
| | Total | 157,500 | 203 | ,776 | | |
| Total | | 687,145 | 405 | 1,697 | | |

Grand Mean = 3,18

**Hotelling's T-Squared Test**

| Hotelling's T-Squared | F | df1 | df2 | Sig |
|---|---|---|---|---|
| 14,291 | 14,291 | 1 | 202 | ,000 |

## Reliability: Usability Convenience of Usability

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 202 | 92,2 |
| | Excluded[a] | 17 | 7,8 |
| | Total | 219 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,707 | ,713 | 5 |

**Inter-Item Correlation Matrix**

| | support on devices | easiness to operate | application | stream speed |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| support on devices | 1,000 | ,328 | ,354 | ,432 |
| easiness to operate | ,328 | 1,000 | ,362 | ,328 |
| application | ,354 | ,362 | 1,000 | ,273 |
| stream speed | ,432 | ,328 | ,273 | 1,000 |
| be shared-importance | ,581 | ,201 | ,257 | ,203 |

**Inter-Item Correlation Matrix**

| | be shared-importance |
|---|---|
| support on devices | ,581 |
| easiness to operate | ,201 |
| application | ,257 |
| stream speed | ,203 |
| be shared-importance | 1,000 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance |
|---|---|---|---|---|---|---|
| Item Variances | ,983 | ,806 | 1,224 | ,418 | 1,518 | ,027 |
| Inter-Item Correlations | ,332 | ,201 | ,581 | ,379 | 2,883 | ,012 |

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 454,986 | 201 | 2,264 | | |
| Within People | Between Items | 15,469 | 4 | 3,867 | 5,830 | ,000 |
| | Residual | 533,331 | 804 | ,663 | | |
| | Total | 548,800 | 808 | ,679 | | |
| Total | | 1003,786 | 1009 | ,995 | | |

Grand Mean = 3,7683

**Hotelling's T-Squared Test**

| Hotelling's T-Squared | F | df1 | df2 | Sig |
|---|---|---|---|---|
| 22,616 | 5,570 | 4 | 198 | ,000 |

## Reliability: Benefit of Sociability

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 203 | 92,7 |
| | Excluded[a] | 16 | 7,3 |
| | Total | 219 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,897 | ,917 | 2 |

**Inter-Item Correlation Matrix**

| | subscribe-frequency | subscribe-importance |
|---|---|---|

| | | |
|---|---|---|
| subscribe-frequency | 1,000 | ,846 |
| subscribe-importance | ,846 | 1,000 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance |
|---|---|---|---|---|---|---|
| Item Variances | 1,540 | 1,116 | 1,964 | ,847 | 1,759 | ,359 |
| Inter-Item Correlations | ,846 | ,846 | ,846 | ,000 | 1,000 | ,000 |

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 564,084 | 202 | 2,792 | | |
| Within People | Between Items | 10,406 | 1 | 10,406 | 36,185 | ,000 |
| | Residual | 58,094 | 202 | ,288 | | |
| | Total | 68,500 | 203 | ,337 | | |
| Total | | 632,584 | 405 | 1,562 | | |

Grand Mean = 3,0320

**Hotelling's T-Squared Test**

| Hotelling's T-Squared | F | df1 | df2 | Sig |
|---|---|---|---|---|
| 36,185 | 36,185 | 1 | 202 | ,000 |

## Reliability: Rewarding Nature of Consumer Involvement

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 203 | 92,7 |
| | Excluded[a] | 16 | 7,3 |
| | Total | 219 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,775 | ,774 | 5 |

**Inter-Item Correlation Matrix**

| | Enjoyness-music listening | Enjoyness-share | Enjoyness-application | Enjoyness-playlist management | Enjoyness-feedback |
|---|---|---|---|---|---|
| Enjoyness-music listening | 1,000 | ,411 | ,420 | ,433 | ,269 |
| Enjoyness-share | ,411 | 1,000 | ,509 | ,493 | ,299 |
| Enjoyness-application | ,420 | ,509 | 1,000 | ,477 | ,405 |
| Enjoyness-playlist management | ,433 | ,493 | ,477 | 1,000 | ,347 |
| Enjoyness-feedback | ,269 | ,299 | ,405 | ,347 | 1,000 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 1,984 | 1,773 | 2,138 | ,365 | 1,206 | ,022 | 5 |
| Item Variances | ,911 | ,740 | 1,040 | ,300 | 1,405 | ,018 | 5 |

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 484,548 | 202 | 2,399 | | |
| | Between Items | 17,846 | 4 | 4,462 | 8,281 | ,000 |
| Within People | Residual | 435,354 | 808 | ,539 | | |
| | Total | 453,200 | 812 | ,558 | | |
| Total | | 937,748 | 1014 | ,925 | | |

Grand Mean = 1,98

**Hotelling's T-Squared Test**

| Hotelling's T-Squared | F | df1 | df2 | Sig |
|---|---|---|---|---|
| 33,846 | 8,336 | 4 | 199 | ,000 |

## Reliability: Feedback of Sociability

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 203 | 92,7 |
| | Excluded[a] | 16 | 7,3 |
| | Total | 219 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,667 | ,934 | 2 |

**Inter-Item Correlation Matrix**

| | be shared-occurence | be shared-frequency |
|---|---|---|
| be shared-occurence | 1,000 | ,876 |
| be shared-frequency | ,876 | 1,000 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2,227 | 1,611 | 2,842 | 1,232 | 1,765 | ,758 | 2 |
| Item Variances | 1,330 | ,239 | 2,421 | 2,182 | 10,133 | 2,380 | 2 |

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 403,153 | 202 | 1,996 | | |
| | Between Items | 153,941 | 1 | 153,941 | 231,958 | ,000 |
| Within People | Residual | 134,059 | 202 | ,664 | | |
| | Total | 288,000 | 203 | 1,419 | | |
| Total | | 691,153 | 405 | 1,707 | | |

Grand Mean = 2,2266

**Hotelling's T-Squared Test**

| Hotelling's T-Squared | F | df1 | df2 | Sig |
|---|---|---|---|---|
| 231,958 | 231,958 | 1 | 202 | ,000 |

## Reliability: Accessibility of Usability

**Case Processing Summary**

| | N | % |
|---|---|---|

| | | | |
|---|---|---|---|
| Cases | Valid | 203 | 92,7 |
| | Excluded[a] | 16 | 7,3 |
| | Total | 219 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,533 | ,540 | 2 |

**Inter-Item Correlation Matrix**

| | playlist management | functional understandbility |
|---|---|---|
| playlist management | 1,000 | ,370 |
| functional understandbility | ,370 | 1,000 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3,601 | 3,557 | 3,645 | ,089 | 1,025 | ,004 | 2 |
| Item Variances | ,942 | ,765 | 1,119 | ,355 | 1,464 | ,063 | 2 |

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 259,360 | 202 | 1,284 | | |
| Within People | Between Items | ,798 | 1 | ,798 | 1,330 | ,250 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Residual | 121,202 | 202 | ,600 | | |
| | Total | 122,000 | 203 | ,601 | | |
| Total | | 381,360 | 405 | ,942 | | |

Grand Mean = 3,60

**Hotelling's T-Squared Test**

| Hotelling's T-Squared | F | df1 | df2 | Sig |
|---|---|---|---|---|
| 1,330 | 1,330 | 1 | 202 | ,250 |

## Reliability: Interaction Share of Sociability

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 203 | 92,7 |
| | Excluded[a] | 16 | 7,3 |
| | Total | 219 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,981 | ,981 | 2 |

**Inter-Item Correlation Matrix**

| | share-frequency | share-importance |
|---|---|---|
| share-frequency | 1,000 | ,963 |

| | | |
|---|---|---|
| share-importance | ,963 | 1,000 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2,044 | 2,020 | 2,069 | ,049 | 1,024 | ,001 | 2 |
| Item Variances | 1,943 | 1,857 | 2,029 | ,173 | 1,093 | ,015 | 2 |

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 770,202 | 202 | 3,813 | | |
| | Between Items | ,246 | 1 | ,246 | 3,372 | ,068 |
| Within People | Residual | 14,754 | 202 | ,073 | | |
| | Total | 15,000 | 203 | ,074 | | |
| Total | | 785,202 | 405 | 1,939 | | |

Grand Mean = 2,0443

**Hotelling's T-Squared Test**

| Hotelling's T-Squared | F | df1 | df2 | Sig |
|---|---|---|---|---|
| 3,372 | 3,372 | 1 | 202 | ,068 |

## Reliability: Interaction Peeking of Sociability

**Case Processing Summary**

| | N | % |
|---|---|---|

| | | | |
|---|---|---|---|
| Cases | Valid | 203 | 92,7 |
| | Excluded[a] | 16 | 7,3 |
| | Total | 219 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,970 | ,971 | 2 |

**Inter-Item Correlation Matrix**

| | peeking-frequency | peeking-importance |
|---|---|---|
| peeking-frequency | 1,000 | ,944 |
| peeking-importance | ,944 | 1,000 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2,759 | 2,749 | 2,768 | ,020 | 1,007 | ,000 | 2 |
| Item Variances | 1,610 | 1,486 | 1,733 | ,247 | 1,166 | ,031 | 2 |

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 631,345 | 202 | 3,125 | | |
| Within People | Between Items | ,039 | 1 | ,039 | ,420 | ,518 |
| | Residual | 18,961 | 202 | ,094 | | |

| | | | | | |
|---|---|---|---|---|---|
| Total | 19,000 | 203 | ,094 | | |
| Total | 650,345 | 405 | 1,606 | | |

Grand Mean = 2,7586

**Hotelling's T-Squared Test**

| Hotelling's T-Squared | F | df1 | df2 | Sig |
|---|---|---|---|---|
| ,420 | ,420 | 1 | 202 | ,518 |

## Reliability: Sociability Suggest of Sociability

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 203 | 92,7 |
| | Excluded[a] | 16 | 7,3 |
| | Total | 219 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,978 | ,978 | 2 |

**Inter-Item Correlation Matrix**

| | suggest-frequency | suggest-importance |
|---|---|---|
| suggest-frequency | 1,000 | ,957 |

| | | |
|---|---|---|
| suggest-importance | ,957 | 1,000 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 2,212 | 2,192 | 2,232 | ,039 | 1,018 | ,001 | 2 |
| Item Variances | 1,593 | 1,562 | 1,624 | ,062 | 1,040 | ,002 | 2 |

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|---|
| Between People | | 629,783 | 202 | 3,118 | | |
| | Between Items | ,158 | 1 | ,158 | 2,300 | ,131 |
| Within People | Residual | 13,842 | 202 | ,069 | | |
| | Total | 14,000 | 203 | ,069 | | |
| Total | | 643,783 | 405 | 1,590 | | |

Grand Mean = 2,2118

**Hotelling's T-Squared Test**

| Hotelling's T-Squared | F | df1 | df2 | Sig |
|---|---|---|---|---|
| 2,300 | 2,300 | 1 | 202 | ,131 |

# 5. Regression Analysis

## Regression

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,303[a] | ,092 | ,045 | ,67700 |

a. Predictors: (Constant), be shared-occurence, subscribe-importance, share-importance, suggest-importance, peeking-frequency, subscribe-frequency, be shared-frequency, peeking-importance, suggest-frequency, share-frequency

b. Dependent Variable: RN

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 8,910 | 10 | ,891 | 1,944 | ,042[b] |
| | Residual | 87,999 | 192 | ,458 | | |
| | Total | 96,910 | 202 | | | |

a. Dependent Variable: RN

b. Predictors: (Constant), be shared-occurence, subscribe-importance, share-importance, suggest-importance, peeking-frequency, subscribe-frequency, be shared-frequency, peeking-importance, suggest-frequency, share-frequency

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1,932 | ,302 | | 6,406 | ,000 |
| | peeking-frequency | -,098 | ,112 | -,185 | -,869 | ,386 |

| | | | | | |
|---|---|---|---|---|---|
| peeking-importance | ,097 | ,121 | ,170 | ,799 | ,425 |
| share-frequency | ,044 | ,128 | ,091 | ,345 | ,731 |
| share-importance | -,092 | ,133 | -,181 | -,694 | ,489 |
| suggest-frequency | -,310 | ,137 | -,560 | -2,266 | ,025 |
| suggest-importance | ,292 | ,133 | ,537 | 2,188 | ,030 |
| be shared-frequency | -,163 | ,065 | -,366 | -2,495 | ,013 |
| subscribe-frequency | -,048 | ,065 | -,098 | -,745 | ,457 |
| subscribe-importance | -,019 | ,086 | -,029 | -,222 | ,824 |
| be shared-occurence | ,528 | ,206 | ,372 | 2,564 | ,011 |

a. Dependent Variable: RN

**Casewise Diagnostics[a]**

| Case Number | Std. Residual | RN | Predicted Value | Residual |
|---|---|---|---|---|
| 3 | 3,305 | 4,20 | 1,9624 | 2,23760 |

a. Dependent Variable: RN

**Residuals Statistics[a]**

| | Minimum | Maximum | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| Predicted Value | 1,3411 | 2,6511 | 1,9842 | ,21002 | 203 |
| Residual | -1,24870 | 2,23760 | ,00000 | ,66003 | 203 |
| Std. Predicted Value | -3,062 | 3,175 | ,000 | 1,000 | 203 |
| Std. Residual | -1,844 | 3,305 | ,000 | ,975 | 203 |

a. Dependent Variable: RN

# Regression

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,212[a] | ,045 | -,005 | 1,14783 |

a. Predictors: (Constant), be shared-occurence, subscribe-importance, share-importance, suggest-importance, peeking-frequency, subscribe-frequency, be shared-frequency, peeking-importance, suggest-frequency, share-frequency

b. Dependent Variable: SymbolicValue

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 11,862 | 10 | 1,186 | ,900 | ,534[b] |
| | Residual | 252,960 | 192 | 1,318 | | |
| | Total | 264,823 | 202 | | | |

a. Dependent Variable: SymbolicValue

b. Predictors: (Constant), be shared-occurence, subscribe-importance, share-importance, suggest-importance, peeking-frequency, subscribe-frequency, be shared-frequency, peeking-importance, suggest-frequency, share-frequency

## Socaibility regression with symbolic value

**Coefficients[a]**

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|

| | | B | Std. Error | Beta | | |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 3,562 | ,511 | | 6,967 | ,000 |
| | peeking-frequency | -,320 | ,190 | -,368 | -1,680 | ,095 |
| | peeking-importance | ,309 | ,205 | ,329 | 1,503 | ,135 |
| | share-frequency | -,071 | ,217 | -,089 | -,330 | ,742 |
| | share-importance | ,009 | ,225 | ,010 | ,039 | ,969 |
| | suggest-frequency | ,085 | ,232 | ,093 | ,368 | ,713 |
| | suggest-importance | ,004 | ,226 | ,005 | ,018 | ,985 |
| | be shared-frequency | ,173 | ,111 | ,236 | 1,565 | ,119 |
| | subscribe-frequency | ,075 | ,110 | ,092 | ,682 | ,496 |
| | subscribe-importance | -,081 | ,146 | -,075 | -,553 | ,581 |
| | be shared-occurence | -,535 | ,349 | -,228 | -1,534 | ,127 |

a. Dependent Variable: SymbolicValue

**Residuals Statistics[a]**

| | Minimum | Maximum | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| Predicted Value | 2,6153 | 4,0696 | 3,1847 | ,24233 | 203 |
| Residual | -2,25350 | 2,16289 | ,00000 | 1,11905 | 203 |
| Std. Predicted Value | -2,350 | 3,651 | ,000 | 1,000 | 203 |
| Std. Residual | -1,963 | 1,884 | ,000 | ,975 | 203 |

a. Dependent Variable: SymbolicValue

## Regression

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,270[a] | ,073 | ,039 | 1,12406 |

a. Predictors: (Constant), functional understandbility, be shared-importance, easiness to operate, playlist management, stream speed, application, support on devices

b. Dependent Variable: SymbolicValue

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 19,232 | 7 | 2,747 | 2,174 | ,038[b] |
| | Residual | 245,120 | 194 | 1,264 | | |
| | Total | 264,351 | 201 | | | |

a. Dependent Variable: SymbolicValue

b. Predictors: (Constant), functional understandbility, be shared-importance, easiness to operate, playlist management, stream speed, application, support on devices

Usability regression with Symbolic value

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t |
|---|---|---|---|---|---|
| | | B | Std. Error | Beta | |
| 1 | (Constant) | 1,768 | ,519 | | 3,407 |
| | stream speed | ,129 | ,092 | ,112 | 1,399 |

| | | | | | |
|---|---|---|---|---|---|
| | support on devices | -,115 | ,121 | -,090 | -,951 |
| | application | ,233 | ,091 | ,205 | 2,557 |
| | be shared-importance | ,025 | ,089 | ,024 | ,277 |
| | easiness to operate | ,026 | ,096 | ,021 | ,270 |
| | playlist management | -,043 | ,084 | -,040 | -,515 |
| | functional understandbility | ,122 | ,101 | ,092 | 1,208 |

**Coefficients[a]**

| Model | | Sig. |
|---|---|---|
| 1 | (Constant) | ,001 |
| | stream speed | ,163 |
| | support on devices | ,343 |
| | application | ,011 |
| | be shared-importance | ,782 |
| | easiness to operate | ,788 |
| | playlist management | ,607 |
| | functional understandbility | ,229 |

a. Dependent Variable: SymbolicValue

**Residuals Statistics[a]**

| | Minimum | Maximum | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| Predicted Value | 2,2040 | 3,7568 | 3,1881 | ,30932 | 202 |
| Residual | -2,73386 | 2,48919 | ,00000 | 1,10431 | 202 |
| Std. Predicted Value | -3,182 | 1,838 | ,000 | 1,000 | 202 |
| Std. Residual | -2,432 | 2,214 | ,000 | ,982 | 202 |

a. Dependent Variable: SymbolicValue

## Regression

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,423[a] | ,179 | ,149 | ,63848 |

a. Predictors: (Constant), functional understandbility, be shared-importance, easiness to operate, playlist management, stream speed, application, support on devices

b. Dependent Variable: RN

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 17,207 | 7 | 2,458 | 6,030 | ,000[b] |
| | Residual | 79,084 | 194 | ,408 | | |
| | Total | 96,291 | 201 | | | |

a. Dependent Variable: RN

b. Predictors: (Constant), functional understandbility, be shared-importance, easiness to operate, playlist management, stream speed, application, support on devices

Usability regression with rewarding nature

**Coefficients[a]**

| Model | Unstandardized Coefficients | Standardized Coefficients | t |
|---|---|---|---|

| | | B | Std. Error | Beta | |
|---|---|---|---|---|---|
| 1 | (Constant) | 3,666 | ,295 | | 12,438 |
| | stream speed | -,059 | ,052 | -,085 | -1,128 |
| | support on devices | -,053 | ,069 | -,069 | -,775 |
| | application | -,074 | ,052 | -,109 | -1,438 |
| | be shared-importance | -,036 | ,050 | -,057 | -,715 |
| | easiness to operate | -,083 | ,055 | -,111 | -1,524 |
| | playlist management | -,150 | ,048 | -,229 | -3,139 |
| | functional understandbility | ,005 | ,057 | ,006 | ,079 |

**Coefficients[a]**

| Model | | Sig. |
|---|---|---|
| 1 | (Constant) | ,000 |
| | stream speed | ,261 |
| | support on devices | ,439 |
| | application | ,152 |
| | be shared-importance | ,476 |
| | easiness to operate | ,129 |
| | playlist management | ,002 |
| | functional understandbility | ,937 |

a. Dependent Variable: RN

**Casewise Diagnostics[a]**

| Case Number | Std. Residual | RN | Predicted Value | Residual |
|---|---|---|---|---|
| 3 | 3,198 | 4,20 | 2,1583 | 2,04173 |

| | | | | |
|---|---|---|---|---|
| 136 | 3,143 | 3,80 | 1,7933 | 2,00671 |

a. Dependent Variable: RN

**Residuals Statistics[a]**

| | Minimum | Maximum | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| Predicted Value | 1,4059 | 2,9708 | 1,9881 | ,29259 | 202 |
| Residual | -1,27027 | 2,04173 | ,00000 | ,62726 | 202 |
| Std. Predicted Value | -1,990 | 3,359 | ,000 | 1,000 | 202 |
| Std. Residual | -1,990 | 3,198 | ,000 | ,982 | 202 |

a. Dependent Variable: RN

## Regression

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,208[a] | ,043 | ,009 | ,61179 |

a. Predictors: (Constant), functional understandbility, be shared-importance, easiness to operate, playlist management, stream speed, application, support on devices

b. Dependent Variable: ConsumerInvolvement

### Usability regression with CI as a whole

**ANOVA[a]**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | Regression | 3,276 | 7 | ,468 | 1,250 | ,277[b] |
| | Residual | 72,611 | 194 | ,374 | | |
| | Total | 75,886 | 201 | | | |

a. Dependent Variable: ConsumerInvolvement

b. Predictors: (Constant), functional understandbility, be shared-importance, easiness to operate, playlist management, stream speed, application, support on devices

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t |
|---|---|---|---|---|---|
| | | B | Std. Error | Beta | |
| 1 | (Constant) | 2,717 | ,282 | | 9,620 |
| | stream speed | ,035 | ,050 | ,057 | ,697 |
| | support on devices | -,084 | ,066 | -,123 | -1,278 |
| | application | ,079 | ,050 | ,130 | 1,599 |
| | be shared-importance | -,006 | ,048 | -,010 | -,119 |
| | easiness to operate | -,029 | ,052 | -,043 | -,548 |
| | playlist management | -,097 | ,046 | -,167 | -2,112 |
| | functional understandbility | ,063 | ,055 | ,089 | 1,151 |

**Coefficients[a]**

| Model | | Sig. |
|---|---|---|
| 1 | (Constant) | ,000 |
| | stream speed | ,487 |

| | |
|---|---|
| support on devices | ,203 |
| application | ,112 |
| be shared-importance | ,906 |
| easiness to operate | ,585 |
| playlist management | ,036 |
| functional understandbility | ,251 |

a. Dependent Variable: ConsumerInvolvement

**Residuals Statistics[a]**

| | Minimum | Maximum | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| Predicted Value | 2,2469 | 2,9847 | 2,5881 | ,12766 | 202 |
| Residual | -1,57128 | 1,36025 | ,00000 | ,60104 | 202 |
| Std. Predicted Value | -2,673 | 3,106 | ,000 | 1,000 | 202 |
| Std. Residual | -2,568 | 2,223 | ,000 | ,982 | 202 |

a. Dependent Variable: ConsumerInvolvement