How qualitative research and quantitative research are jointly designed to analyze the web-based contents

Empirical research of users at Etsy Discussion forum

STUDENT

JINKYEUNG JEONG
412453
412453jj@eur.nl

SUPERVISOR

CHRISTIAN W. HANDKE

MASTER THESIS
12 JUNE 2017
ABSTRACT

The Internet is a powerful tool to build marketplaces. The Internet platforms play a role to help buyers and sellers to find each other. One of the Peer-to-Peer web platforms, Etsy, is the largest online marketplace for craft and vintage items. The Etsy platform is a community driven marketplace where all the members of Etsy share a buying, selling and manufacturing. To study the propensity of Etsy members, Etsy Discussion forum was investigated. The aim of this study is to design a combined qualitative and quantitative research method to analyze the web-based contents. Using the combined methods, 200 random samples from Etsy Discussion forum were analyzed under qualitative content analysis and statistical tests. The empirical research part of this study emphasized on qualitative content analysis in order to assume the propensity of users in Etsy Discussion forum. Additionally, using statistical test was to assume the interaction between users. As a result, the combined qualitative and quantitative research method provided diverse opportunities to analyze diverse perspectives.

Keywords: Web-based contents, Combined qualitative and quantitative research method, Qualitative content analysis, and Peer-to-Peer platform
# Table of Contents

ABSTRACT ......................................................................................................................... 2  

1. INTRODUCTION .............................................................................................................. 4  

2. BACKGROUNDS ............................................................................................................. 6  

3. METHODS ....................................................................................................................... 9  
   3.1 Literature Reviews ......................................................................................................... 9  
   3.2 Design of Empirical Research .................................................................................. 12  

4. RESEARCH DESIGN ....................................................................................................... 14  
   4.1 Collecting Data ............................................................................................................ 14  
      4.1.1 Sampling ............................................................................................................... 14  
      4.1.2 Unit of Analysis ................................................................................................... 15  
      4.1.3 200 Random Samples ....................................................................................... 15  
   4.2 Creating Datasets ....................................................................................................... 15  
      4.2.1 Numerical Data .................................................................................................... 16  
      4.2.2 Content Analysis .................................................................................................. 17  

5. DATA ANALYSIS ........................................................................................................... 21  
   5.1 The First Analysis ....................................................................................................... 21  
   5.2 The Second Analysis .................................................................................................. 25  
   5.3 Results ....................................................................................................................... 28  

6. FINDINGS ....................................................................................................................... 29  
   6.1 Limitations .................................................................................................................. 30  

7. DISCUSSION ................................................................................................................... 31  

8. CONCLUSION ............................................................................................................... 32  

10. REFERENCES ............................................................................................................... 34  

APPENDIX A ..................................................................................................................... 37  
APPENDIX B ..................................................................................................................... 74  
APPENDIX C ..................................................................................................................... 105  
APPENDIX D ..................................................................................................................... 107
1. INTRODUCTION

In 1995, eBay was one of pioneers in creating an online marketplace (“eBay”, 2017). After the successful story of eBay, the Internet is a powerful tool to build marketplaces in terms of helping buyers and sellers to find each other. Also, the growing base of the Internet and web users to participate in online shopping and trading activities shows a significant opportunity for e-commerce (Green, 1999). There are a great number of companies building marketplaces on the Internet; examples are marketplaces for local goods and services (e.g. Craigslist), consumer loans (e.g. Prosper), crafts (e.g. Etsy), start-up financing (e.g. Kickstarter), accommodation (e.g. Airbnb), and currency exchange (e.g. TransferWise). The web-platforms of these examples are based on Peer-to-Peer (hereafter ‘P2P’) networks, which provide an online connection between sellers (including providers) and buyers in the particular online marketplaces. These business features share common elements like lowering entry costs for sellers, and allowing individuals and small businesses to compete with traditional firms (Einav, et al., 2016). Taking advantage of Internet technology also helps improve the matching of buyers and sellers and implement flexible pricing in online marketplaces. Thus, the rise of P2P markets has provided a fascinating set of examples of innovative market design as well (Einav, et al., 2016). These markets provide ideal niche from where products can be offered to the potential buyer that actually searches for them in a specific way (Sales Layer, 2017). According to the structure of online markets, companies such as eBay, Etsy, and Airbnb allow members of their web-platforms to experiment with prices, selling mechanisms, and advertising strategies via their platforms. Considering the advantages of online marketplaces, it sounds a great opportunity for individuals or small business owners to make profit.

In general craft marketplaces, handmade or custom-made products are sold by the sellers themselves, typically artisans and designers. Furthermore, online craft marketplaces, as niche markets, provide valuable distribution platforms for self-employed microbusiness entrepreneurs (Weinswig, 2016). These marketplaces have built communities as a core part of their business model. The communities driven by sellers provide more opportunities to share experiences and business ideas and to cooperate with other sellers. In other words, there is a dominant feeling of belonging among all the members of communities who share a buying, selling and manufacturing philosophy, and this encourages greater loyalty (Sales Layer, 2017). Considering the features of craft online marketplaces, Etsy is the best example platform.
Etsy, one of the P2P web platforms for crafts, is rapidly growing and is the largest online marketplaces for crafts and vintage items. Compared to other online craft marketplaces (Weinswig, 2016), Etsy has the most number of registered merchants, with 1.7 million active sellers, and the most active buyers, with 28.6 million Etsy users according to monthly traffic (Etsy Annual Report 2016). According to Etsy Annual Report 2016 (2017), the Etsy community is very active. It has forums where users share experiences, discuss business matters, and ask advice. Etsy Community Forums are divided into different sections, namely Questions, Discussions, Bugs, Chitchat, and Promos sections. Among these five sections, the Discussion forum section is the most popular and has the most number of posts. In other words, many users participate in the Discussion forum for many reasons. Finding the most frequent topics at Etsy Discussion forum is able to expect the Etsy users’ propensity to post.

To study the propensity of users at Etsy, I used a quantitative research method and a qualitative research method to analyze contents from posts in the Etsy Discussion forum. Analyzing web-based contents is quite challenging, because contents are in a variety formats and are mostly unstructured. To solve these difficulties, I used a qualitative content analysis, which is a process of analysis from inductive development of categories to deductive application of categories (Marying, 2000). Using the qualitative content analysis, I conducted two cycles of coding to count the most frequent topics at Etsy Discussion forum. In addition, the number of responses to a post and the word counts of a post’s content are collected as quantitative data in order to research the relationship within coded content data. My paper focuses on describing how the qualitative and quantitative research methods are jointly designed to analyze the web-based content.

The structure of my paper is as follows: the background of online craft marketplaces and information about Etsy marketplaces are explained in the section 2; section 3 contains a literature review; section 4 explains the procedure of how to collect the data and how to jointly design my empirical research; section 5 explains how to conduct data analysis based on my research design; section 6 elaborates the findings based on my empirical research and limitation to conduct the empirical research; Section 7 discuss the connection between theories and my empirical research design; and my paper concludes with avenues for further research in section 8.
2. BACKGROUNDS

Unlike eBay and Amazon, Etsy is specialized to the craft online marketplaces. Compared with other online craft marketplaces, Etsy has the most active buyers and sellers (Weinswig, 2016). It was founded in 2005, in Brooklyn, New York, USA. Etsy acts as an intermediary peer-to-peer (hereafter ‘P2P’) e-commerce website, focusing on handmade or vintage items and supplies, as well as unique factory – manufactured items (“Etsy”, 2017). The idea of the Etsy platform follows in the tradition of open craft fairs, where sellers promote their goods and interact other sellers and buyers. Thus, the role of Etsy is to provide a craft marketplace for self-employed microbusiness entrepreneurs including emerging artists, designers, craftspeople, and artisans.

Etsy consists of three main actors; Etsy sellers, Etsy buyers, and Etsy employees. Firstly, Etsy employees are the staffs who work for the Etsy platform. Their main task is to support sellers and buyers by providing technical services, including transaction system, managing Etsy shops, and fixing system errors. As of December 31, 2016, there are 1,043 Etsy employees worldwide, including 648 in Brooklyn office; there are 319 in engineering, 124 in products, 187 in member operations, 276 in corporate, and 137 marketing (Annual Report of Etsy, 2017). Secondly, Etsy sellers are diverse, including artists, makers, designers and collectors. Etsy sellers range from antique furniture collector to textile graphic designers. Etsy sellers have great opportunities to enter the marketplace with low costs, in which they should pay $0.20 per listing 3.5% commission on the sale of each listing. The simple mechanism of creating an Etsy store makes many creative entrepreneurs participate in Etsy. The intention of Etsy buyers is to find personalized products for their desires. According to the Etsy survey, most buyers at Etsy have an intention to order customized products and find unique items (Annual Report of Etsy, 2017). As of December of 31, 2016, the Etsy platform had connected 1.7 million active Etsy sellers and 28.6 million active Etsy buyers in the worldwide. These major three actors build Etsy Community. According to official document, Etsy Community is described, as following:

‘Etsy Community is made up of creative entrepreneurs who sell on Etsy platform, thoughtful consumers looking for buying unique goods in Etsy marketplace, responsible manufacturer who help Etsy sellers grow their business and Etsy employees who maintain Etsy platform and nurture Etsy ecosystem (Nasdaq, 2017)’. 
Thus, Etsy platform is a community driven marketplace where all the members of Etsy share a buying, selling and manufacturing.

Etsy contributes to two concepts. The first concept, sharing economy through online marketplaces, is described thus: ‘sharing economy or collaborative consumption is peer-to-peer-based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community – based online services’ (Hamari, et al., 2015). Another defining by Godelnik (2015), sharing economy allows humanity to consume less in order to achieve economy degrowth in consumption and production while maintaining quality of life, or even improving it with more social interactions and stronger community relationships (Godelnik, 2015). Regarding concepts of sharing economy, Etsy platform creates markets in sharing by facilitating exchanges. Furthermore, it provides non-commercial markets, where they are mostly small-scale and community-based (Codagnone and Martens, 2016). It offers individuals the option to make a living and live a life that is built around human connection and creativity. Etsy also calls their platform the Etsy Economy, in which the marketplaces offers an engaging way for Etsy buyers to find diverse and unique handmade and vintage goods as well as craft supplies (Annual Report of Etsy, 2017).

Another concept is an intermediary. The conventional concept of intermediary is a middleman between two parties (Benghozi and Paris, 2016). The traditional role of an intermediary is to add value and to provide services to two parties (Anderson and Anderson, 2002). In the cultural field, the work of intermediation affects on both social interaction platforms and economic transactions or financial flows as a means to adjust supply and demand (Benghozi and Paris, 2016). Considering this circumstance, the digital platforms (i.e. the Internet platforms) contribute to the empowerment and reorganization of the chain in the online marketplaces. In other words, applied to the e-commerce world, the role of the intermediary exists still. The new form of intermediary within e-commerce is the Internet platform, where it provides a meeting point in order to connect sellers and buyers. Etsy is an intermediary, as it builds the meeting points between sellers and buyers and provides services to Etsy users, like technical supports for its sellers and trustful online transaction supports for its buyers.

Etsy has two types of competitors. On the one hand, Etsy competes with other retailers, online platforms, and online services for sellers. For instance, one of the famous online marketplaces, eBay, has a similar structure and operation model. Attracting many users, including sellers and buyers, is the most essential goal because a large population on Etsy makes the Etsy Community stronger relationships between sellers and buyers. Another
example is companies that sell software and services to support small business are competitors. Etsy is supposed to support sellers with all kinds of services to small business, but these companies makes Etsy sellers run their business independently. On the other hand, each seller at Etsy is a competitor within the Etsy marketplace. Etsy are able to compete for buyers based on the unique items that sellers list within the marketplace, awareness of its brand, the person-to-person commerce experience, the reputation for authenticity, ease of payment, and the availability and reliability of Etsy platform itself.

The purpose of the Etsy Community is to inspire each other, share knowledge, discuss ideas, and build relationships. To achieve these goals, the Etsy Community creates a public space, which is a connecting channel among users and employees. This public space is called Etsy Forums, consisting of six sections, depending on subjects (e.g. questions, discussions, bugs, chitchat, and promos). Etsy Forums have several rules (https://www.etsy.com/legal/community):

1. Your posts in the Forums are permanent (unless they are deleted by Etsy for violation of policies);
2. Your posts should be helpful, constructive, and encouraging when voicing dissent or criticism;
3. Moderators may take certain actions to keep the Forums organized and helpful for everyone. Such actions are not up for public discussion;
4. Etsy reserves the right to remove any inappropriate content in the Forums at any time; and
5. You may lose your Etsy Forums and Seller Handbook posting privileges if you violate any community policies

Based on these policies, Etsy users, including sellers and buyers, can share their concerns and ideas with others. Among the subjects within the forums, I investigated the Discussions Forum, which is a place to get advice and talk about business related topics with the Community.
3. METHODS

Etsy is an e-commerce platform and an online intermediary in the online crafts and vintage items marketplace. Etsy provides many channels, which are meeting points between sellers and buyers. This study has focused on measuring the interaction among users by counting the most frequent topics among users. My empirical research is jointly designed with qualitative research and quantitative research methods. Based on the inductive approach, analyzing sample posts in the Etsy Discussion forum draws the attitudes of users within the online crafts marketplace.

In this section, I review several theories and methodologies to analyze the web-based contents. I use the combined methods of qualitative and quantitative research methods text data to draw quantitative outputs. Therefore, this section includes the literature review and design of my empirical research.

3.1 Literature Reviews

General content analysis is a research technique to study a broad range of texts by interpreting and coding textual data. Before deciding to use content analysis methodology, I considered two methodologies, namely thematic analysis and content analysis. There are no clear boundaries to distinguish these two methodologies. But the main characteristics of thematic analysis and qualitative content analysis are different, in the following diagram (Vaismoradi, et al., 2013, p399).

![Diagram](image-url)

*Figure 1*: Main characteristics of thematic analysis and qualitative content analysis in the continuum of the qualitative methodology (Vaismoradi, et al., 2013, p399)
Figure 1 shows a clear picture of qualitative content analysis. The goal of my study is to understand the interaction or relationships between Etsy users in a particular space and to find the most frequent topics within the Etsy platform. Also, content analysis is a systematic coding and categorizing approach used for exploring large amounts of textual information to determine trends and patterns of words used, their frequency, their relationships, and the structures and discourses of communication (Vaismoradi, et al., 2013, p400). Thus, content analysis is a good research technique to carry out my empirical research.

Academic researchers consider content analysis as a flexible method for analyzing text data (Cavanagh, 1997). Based on many academic researchers, content analysis is used to study a broad range of texts and to focus on a research technique for the objective, systematic, and quantitative description of the manifest content of communication (Macnamara, 2005, p3). Initially, content analysis was used as either a quantitative or qualitative methods in the past (Hsieh and Shannon, 2005). Regarding quantitative method, content analysis is used as coding text into explicit categories and using statistics, which means this method approaches to quantitative analysis of qualitative data (Morgan, 1993). Additionally, one of the most prominent researchers, Neuendorf (2002), argues that content analysis is a process of summarizing the qualitative data (i.e. texts) based on scientific methods (Macnamara, 2005).

In other words, the key point of Neuendorf (2002) is that content analysis should be carried out by scientific methods, including attention to objectivity-intersubjectivity, a priori design, reliability, validity, generalizability, replicability, and hypothesis testing (Neuendorf, 2002).

Another method of content analysis focuses on the characteristics of language as communication with attention to the content or contextual meaning of the text (Hsieh and Shannon, 2005). This approach is based on the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns (Hsieh and Shannon, 2005). Additionally, this is inductive category development and deductive category application to precede qualitative content analysis (Mayring, 2000). Classical content analysis focuses on the interpretation of texts (Krippendorf, 1980, p.76). This means that categories to interpret the sample texts are already prepared for content analysis. Unlike classical content analysis, the model of inductive category development is to formulate categories, derived from the textual material (Mayring, 2000).

Since the development of the Internet, online and web-based forums are the major space for communication. Thus, media content analysis allows examination of a wide range of data over an extensive period to identify popular discourses and their likely meanings (Macnamara, 2005, p4). Furthermore, the combination of quantitative and qualitative research
techniques is an ultimate goal to catch deeper meanings and producing reliable findings by scientific methods (Macnamara, 2005, p6). Thus, applying content analysis to web-based or online texts will face many challenges to appropriate output.

Based on scientific methods for media content analysis, a research paper by Kim and Kuljis (2010) provides practical information about how to apply content analysis to web-based content and how to build coding scheme step-by-step. The main goal of the empirical research finds cultural impacts on the use of design features with regard to self-disclosure on the blogs of two nationalities. Unlike the plan of my empirical research, their coding variables are not the form of texts, (e.g. profile image, gender, age, location, occupation, hobby or interest, and contact link) (Kim and Kuljis, 2010). This research paper shows what variables could be measureable and connect to other variables to compare. Another key point of this research is defining the unit of analysis of web-based content. According to the research paper, defining the unit of analysis on web-based content was quite challenging because of the combined multiple media forms (Kim and Kuljis, 2010).

After setting up the framework of content analysis for my empirical research, I reviewed two texts about coding scheme. First of all, defining the level of analysis is important for constituting concepts (Carley, 1993). In my research design, a single post of a user at Etsy Discussion Forum is a single unit of analysis. This means the texts within a post are measured as a single code. The approach of taking a list of concepts and a set of texts is the map analysis approach (Carley, 1993). This map analysis approach helps develop the concepts to be organized into categories and to build connections between concepts (Carley, 1993).

In order to set up the concrete coding scheme, Salanda’s Coding manual (2009) was used. According to Saldana (2009), conducting the First Cycle Coding proceeds from a small to a big range (i.e. coding from a word to a sentence and coding from a sentence to an entire text). Unlike the First Cycle Coding, developing a coherent synthesis of the data corpus is the Second Cycle Coding (Saldana, 2009, p149). In addition, considering quantitative data along with qualitative content analysis will improve our understanding. According to Creswell (2007), qualitative data tends to be open-ended without predetermined responses, while quantitative data usually includes closed-ended responses (Creswell, 2014). Using both qualitative data and quantitative data develops a wide variety of research questions (Creswell and Plano Clark, 2011).
The concrete concept of media content analysis contributes to the design of my empirical research. The next sub-section will introduce my own research design based on my literature review.

3.2 Design of Empirical Research

The purpose of my paper is to design a jointly quantitative research and qualitative research method in order to analyze the web-based content. Generally, the term of web-based content includes the textual, visual, or aural content that is encountered as part of the user experience on websites (“Web content”, 2017). Despite a broad usage of web-based content, my paper will use it as a narrow concept. In section 4.2 it will define what is web-based content in my empirical research. To achieve the purpose of my research, I studied the Etsy Discussion forum, which is an online meeting point for Etsy users to communicate. My empirical research has two approaches. The first approach is to find out the most frequent topic among users, who initiated to post their concerns, ideas, and experiences on Etsy Discussion forum (i.e. creators). I used the model of inductive category development to characterize the content (Mayring, 2000). Thus, First Cycle Coding is an inductive process to develop categories for Codebook. After building Codebook, it is using for deductive category application, in which quantitative aspects (e.g. frequencies of coded categories at Etsy Discussion forum) are analyzed. After the first approach of qualitative content analysis, the second approach finds the topics with the most interest for Etsy users (i.e. creators and respondents). The Second Analysis conducts the comparison between the numbers of responses and frequencies of coded categories by Second Cycle Coding.
Figure 2: Steps of my empirical research

1. **Collecting Data**
2. **200 Random Samples**

   - **Quantitative Data**
     - Number of Responses
     - Word Counts
   - **Qualitative Data**
     - First Cycle Coding
     - Codebook
     - Second Cycle Coding

**First Analysis:** Qualitative Content Analysis

**Second Analysis:** Numerical Data Analysis
4. RESEARCH DESIGN

This section will consist of two major sub-sections: collecting data and creating datasets. The first sub-section explains how to collect data and what criteria are applied, including sampling data, selecting 200 random samples, and unit of analysis. The second sub-section describes the different methods to creating datasets, which are based on quantitative data and qualitative data. These two different datasets will be combined during data analysis, which will be explained after this section.

4.1 Collecting Data

In this section, I explain the target analysis data and the process of collecting data in the following:

4.1.1 Sampling

My data is from the Etsy Discussion Forum. The time frame of sampling data is between January and December, 2016. Collecting all data from the entire 2016 is too big to analyze within the limited time. Therefore, I selected one particular date on every month. It means the 15th of every month of 2016 is a selected date. I believe that each 15th date of months is less impact on other events and holidays. In other words, the contents of posts would not be concentrated on only specific events or holidays on 15th of every month in 2016.

The total selected days are 12 days and total number of posts is 1591. Sampling 1591 data includes titles of posts, the number of replies on a single post, direct links, hash-tag and store names of posters. After collecting sampling data, I had a proportion output of what number of posts is in every month in 2016.

![15th of Every Month in 2016](image)

*Figure 3: Number of Sampling Data*
4.1.2 Unit of Analysis
Using two research methods, there are two types of units to be analyzed. Under a process of quantitative research, a single post is a single unit of analysis. On the other hand, conducting a qualitative content analysis, a single sentence within a content is a single unit of analysis. This unit of analysis is interchangeable to a unit of coding under qualitative content analysis.

4.1.3 200 Random Samples
Using a random number generator on the Internet, 1591 samples are assigned to random numbers from 1 to 1591. Among 1591 samples with randomly given numbers, the samples from 1 to 200 are selected to study. Selected 200 random samples are printed as PDF files. The reason is to maintain the original data as ‘frozen in time’.

The random number generator on the Internet was retrieved from: https://www.random.org/sequences/?min=1&max=1591&col=1&format=html&rnd=new (Timestamp: 2017-04-10 17:21:01 UTC). Figure 4 shows the numbers of sampling data and 200 random samples simultaneous.

Figure 4: The numbers of Sampling Data and 200 Random Samples

4.2 Creating Datasets
After drawing 200 random samples (hereafter ‘200 samples’), I created two data sets, which are based on numerical data and content analysis. First, the numerical data includes word counts, numbers of replies, and characteristics of contents. Second, qualitative content analysis consists of three stages. First Cycle Coding is a basis to create Codebook. Also, coded topics under First Cycle Coding are coded into categories based on Codebook. Third stage is Second Cycle Coding. The purpose of Second Cycle Coding is to match between units of analysis with numerical data.
4.2.1 Numerical Data
Generally, it is a numerical form, which can be measured in units. This type of data often involves closed questions as these produce either numerical data or data that can be put into categories (e.g. Yes or No answer) (Babbie, 2008, p447). The dataset including all numerical data is enclosed in Appendix A of this research paper.

4.2.1.1 Word Counts
A post forms titles, name of writer, name of store, time, and content. Counting the words is only for content on the post. 200 samples are printed as PDF files and converted to Word, which provides the word count function. Some posts contain a web-link, which it is counted as one word.

4.2.1.2 Numbers of Responses
The interface of a post indicates the number of responses on the post automatically. It is an indication how many people have discussed the post.

4.2.1.3 Categorizing Contents
Classifying the contents into three categories is to study whether users are more often responding to question contents or non-question contents. More responses on the post can be interpreted as the most interesting topics for creators and respondents in the Etsy Discussion forum. For this purpose, I classified 200 samples based on four conditions, as following:

1. The question sentences or phrases should include the question mark;
2. The question sentences or phrases may include ‘Wh – questions’ (i.e. what, why, how, which, where, who);
3. The order of sentences or phrases following a question form, based on grammar (i.e. the order of question form is: verb word+ subject word + other words +?); and
4. I have considered the valid (or countable) question sentence or phrase consists of more than 3 words.

According to these four conditions, 200 samples are classified into three categories: Questions, Non-Questions, and Non-Applicable.
4.2.1.4 Example

The example (see Figure 6) shows how the interface of post in the Etsy Discussion forum looks. A poster contains Title, Name of poster, Name of Etsy shop, Time, Content, and Number of Responses.

Figure 6: example of a post in the Etsy Discussion Forum

4.2.2 Content Analysis

For analyzing the content of posts at Etsy Discussion forum, I carried out two different coding in order to build Codebook and compare with quantitative data. First Cycle Coding is an inductive category development. Based on developed categories under First Cycle Coding, I build Codebook, with which I can deductively apply coded units into categories. This entire procedure is under qualitative content analysis. Second Cycle Coding is a process to change a unit of analysis. This process is linked to quantitative analysis of qualitative data. These three steps are interconnected to generate meaningful data in order to analyze the most frequent topics among users and the relationship among users.
4.2.2.1 First Cycle Coding

As mentioned in literature reviews, the purpose of First Cycle Coding is a process of inductive category developments (Mayring, 2000). In other words, the qualitative content analysis in First Cycle Coding creates categories to classify units into created categories. According to the Coding Manual by Saldana (2009), First Cycle Coding is in magnitude from a single word to a full sentence to an entire page of text to a stream of mobbing image.

At the first stage, determining a unit of coding is a key point in First Cycle Coding. The unit of coding is a full structured sentence in the contents. Entire sentences in the content are challengeable to code. The web-based contents are often with broken sentences and slangs to express writers’ opinions or ideas freely. For appropriate coding process, I filtered some sentences, which are not codeable. For this reason, a unit of coding is a full structured sentence and a single post is coded multiple times.

The scheme of First Cycle Coding is the Descriptive Coding rule, which is summarizes the primary topic of the sentence (Saldana, 2009). Following the scheme of Descriptive Coding, a single post has multiple topics to be coded. Following Example 1 shows a content and coded multiple topics within the content. When conducting Descriptive Coding, I tried to keep the original words (i.e. terms) from the target post. The main reason for this is to understand the comprehensive meanings from the original contents without contamination.

<table>
<thead>
<tr>
<th>Codeable Content</th>
<th>Topic 1</th>
<th>Topic 2</th>
<th>Topic 3</th>
<th>Topic 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>people who work at the US Post can ship everything for free? (T1)</td>
<td>US Post</td>
<td>From Thailand to the US</td>
<td>Free to return</td>
<td></td>
</tr>
<tr>
<td>This customer enquires about a small order which is on the way to her from Thailand to the US (T2), I tell her it will most likely arrive next week. She needs it in 2 weeks but she wants to return it anyway when it arrives I tell her she is free to return it of course and I will refund her, but it will likely cost her more to ship it back than the whole order plus shipping is costing her She then states that she works for the US Post and can ship anything she wants for free! (T3) Wow what a god job that is!</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: The First Cycle Coding Table

The entire First Cycle Coding Table is enclosed in Appendix B.
4.2.2.2 Codebook

After completing First Cycle Coding, I classified the coded topics into similar subjects in order to build the categories for Codebook. See Table 1, the example shows how the content of post is coded as 3 topics; US Post, From Thailand to the US, and Free to return. All coded topics are from the highlighted sentences from the content. These coded units are used for developing categories for Codebook. The first topic ‘US Post’ is classified to the category ‘Shipping Companies’, which the topic is including the name of Shipping Company in US. The second topic ‘From Thailand to the US’ is classified to the category ‘International Shipping’, which clearly indicates two different countries in the content. Lastly, the topic ‘Free to return’ is classified to the category ‘Returns’, which the matter is related to the way of return in the content. These categories ‘Shipping Companies’, ‘International Shipping’, and ‘Returns’ are a family category of ‘Shipping’. Thus, the categories on Codebook are made from the coded topics from contents in regards with the inductive category developments.

The total number of coded sentences is 361. In other words, 361 topics are separately coded. Based on 361 coded sentences, I classified similar topics to bind into categories, which is a family group. The Final Codebook consists of 3 hierarchical levels of categories with definitions. The following example (see Figure 6) shows the hierarchical orders and numbers that indicate the coded sentences into the categories. Therefore, the categories range from small to big concepts, or from level 3 to level 1.

Figure 6: The process how level 1 is developed from level 3 in Codebook

<table>
<thead>
<tr>
<th>Level 1:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etsy Facilitates (53)</td>
</tr>
<tr>
<td>Operation of Shops (231)</td>
</tr>
<tr>
<td>Others</td>
</tr>
</tbody>
</table>

Level 2 of Etsy Facilitates (53):
- improvement of Etsy (2)
- New layout (11)
- **Technical Supports (26)**
- others (14)

Level 3 of Technical supports (26):
- SEO (4)
- Banners (6)
- Patterns (4)
- Cover-photo (3)
- Sales supports (6)
- Others (3)
After completing the Codebook, I conducted deductive category application of coded topics through First Cycle Coding. The Data analysis section will elaborate how to count frequent topics after coding qualitative data. A Matrix of categories and number of coded units are enclosed in Appendix D.

### 4.2.2.3 Second Cycle Coding

According to the Second Cycle Coding scheme by Saldana (2009), the goal is to develop categories without distracted attention at this time to their properties (Saldana, 2009, p155). Unlike units of coding from the First Cycle Coding, a single post is a unit of coding in the Second Cycle Coding process. The main reason for this is that the output of the Second Cycle Coding is analyzed with numerical data, which I collected beforehand. The Second Cycle Coding is combined into Appendix A with numerical data.

The following bar chart is the Number of Coding Sentences into Categories. It shows how many posts are coded into the Level 1 of Codebook.

<table>
<thead>
<tr>
<th>Non Codeable</th>
<th>Etsy Facilitates</th>
<th>Operation of Etsy Shops</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>32</td>
<td>148</td>
</tr>
</tbody>
</table>

Figure 7: The Number of Coding Sentences into Categories

### 4.2.2.4 Limitations of Qualitative Content Analysis

Conducting content analysis of web-based content is challenging for several reasons. First of all, my empirical research is carried out alone. This means that the reliability of the Coding Scheme cannot possibly be checked by inter-coder. For this weakness of my empirical research, I had two alternatives. One is that I tried to elaborate all coding procedures transparently and reveal all obstacles. The second one is a mixed form of empirical research. Thus, the Second Cycle Coding focused on coding matches between units of analysis with numerical data in order to find the relationship between numbers of responses and word counts.
5. DATA ANALYSIS

In accordance with the Research Design, I have elaborated the design of my empirical research, how I collect qualitative and quantitative data. After completing datasets, I will analyze two different types of datasets. This Data Analysis Part consists of two sections; the first analysis focuses on how to interpret the quantitative output from qualitative coding data; the second analysis section explains how to figure out the relationships between numerical data and qualitative coding data.

5.1 The First Analysis

To acquire quantitative output from qualitative coding data, I carried out classifying units of coding from the First Cycle Coding into Categories of the Codebook. The process of counting the numbers of coded topics is a combination of two methods. Analyzing contents of posts is qualitative research method and analyzing generated numerical output from qualitative data is quantitative research method. Thus, counting the numbers of coded units from contents indicates the frequency of topics within the Etsy Discussion Forum in the particular time frame. This analysis is able to figure out the trends of topics and behaviors of users in the forum. The following table shows how many units are counted into categories of Codebook. There are four hierarchical levels to categorize the concepts.

The following Table shows numbers of coded units based on concepts. The total number of coded units is 392 from 179 posts. 21 posts were unable to be coded on the basis of four conditions; the post is written in another language; the post contains only web-link without any words; the post is unable to be classified into categories of the Codebook; and the post is already removed by the creator.

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etsy Facilitates</td>
<td>Improvement of Etsy 6</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>New Layout</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical Supports 42</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEO 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Banners 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patterns 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cover-photo 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sales Supports 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others 17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation of Shops 314 Information 55</td>
<td>Tax 4</td>
<td>Milestones 7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Competitors 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comparison 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Number of Coded Units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification of Users</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales and Views</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listings</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pricing</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shop Prices</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material Prices</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Custom Orders</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancellation</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shop Features</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of Sales and/or Views</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipping</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipping Companies</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipping Issues</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methods</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipping Costs</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>International Shipping</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delayed Shipping</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Returns</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Products</td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photography</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Editing</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tools</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reviews</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copyrights</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Character of Items</td>
<td>39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transaction</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refunds</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PayPal</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transactions</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion on Social Media</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discounts</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2**: A Matrix of Categories and Number of Coded Units

Regarding the Table 1, it is clear that the volume of topic ‘Operation of Shops’ is four times larger than the volume of topic ‘Etsy Facilitates’. I can presume that users in the Etsy Discussion Forum tend to share their issues, related to the Operation of Etsy Shops. This shows that users of the Etsy Discussion Forum keep to the guidelines, which are announced by Etsy. In addition, the contents of posts are appropriate to be posted in the Discussion Forum.
Figure 8: A Number of Coded Units under the Topics of Operation of Etsy Shops.

Under the Topic of ‘Operation of Etsy Shops’, there are six Level 2 categories and twenty-nine Level 3 categories. Figure 1 shows which topics are the most frequent under Level 3. The topic of ‘Character of Items’ counted 39 coded units, the largest group. While qualitatively coded, the topic of ‘Character of Items’ is mainly related to identify their products at the beginning of the post. In other words, creators tended to describe the products what they are selling or sold in Etsy marketplaces. For instance, the topic ‘Character of Items’
is coded by units, which include ‘to sell artworks and custom painting’, ‘custom barn wood signs’, ‘vintage Swedish items’, etc. Thus, I counted units as ‘Character of Items’ when they include the description and name of products or services for sale in Etsy Shops.

The second most frequent topic is ‘Sales and Views’ which counted 33 units. Unlike the topic of ‘Character of Items’, it is simple to code; units include the word ‘Sale’ and/or ‘View’. For instance, the coding unit is “I’ve had my shop open for several months not but I’m not really getting any sales”. Most units are combined with the words ‘low’, ‘any’, and ‘down’. It means that this topic probably includes the negative aspects about ‘Sales and Views’. Unlike the topic ‘Character of Items’, the indication of ‘Sales and Views’ topic is users’ concerns about operating their business.

The third most frequent topic is ‘Promotion on Social Media’, which counted 24 units. Units including the names of other Social Media or Platforms are coded. The example of coded unit is: “I started to use Instagram as a platform for promotion”. While coding into ‘Promotion on Social Media’ topic, it is also obvious to code. The second and third most frequent topics seemed to be related because social media promotion is one way to gain sales and views.

![Figure 9: Number of Coded Units under the Topics of Etsy Facilitates and Operation of Etsy Shops](image)

**Figure 9**: Number of Coded Units under the Topics of Etsy Facilitates and Operation of Etsy Shops

Unlike the most frequent topics under Level 3, ‘Sales’ is the most frequently coded under Level 2. Coding units of ‘Sales’ are 76. The second most frequent topic is ‘Products’ as
72. Surprisingly, the third most frequent topic is ‘Shipping’ under Level 2, which is different from the third most frequent topic (i.e. ‘Promotion on Social Media’) under the Level 3.

In accordance with Figures 8 and 9, the main concerns of creators are the selling products and describing their selling products to others.

5.2 The Second Analysis

The First Analysis shows the frequencies of coded categories. The most frequent topics in the Etsy Discussion forum show that describing their products to sell on Etsy marketplaces gains the most interest of post creators. Thus, the first analysis interpreted the attitudes of post creators but not the entire user cohort of the Etsy Discussion forum. To analyze the relationship between creators and respondents on post, Number of responses and coded unit under the Second Cycle Coding can analyze the attitudes of both sides. The key challenge to compare means between variables is that each variable has different sample sizes. This means the unequal variance t-test does not make the assumption of equal variances (Ruxton, 2006). In spite of different sample sizes of variables, independent-samples t-test is possible with violation of the assumption of homogeneity of variances (Ruxton, 2006).

The numerical data set contains word counts of posts, numbers of responses, the characteristics of posts, and the coded topics by the Second Cycle Coding. Word counts and numbers of responses are ratio measurements, and the other two variables are nominal measurements. With these variables, I conducted three statistical tests. There are three statistical tests to elaborate the comparison among variables.

<table>
<thead>
<tr>
<th>Group Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SECOND CYCLE CODING (TOPICS)</strong></td>
</tr>
<tr>
<td>REPONSES</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Table 3: Statistical Test between Numbers of Responses and Second Cycle Coding Topics

According to Table 3, the first test shows the different means of responses between the topic of Etsy Facilitates and the topic of Operation of Etsy Shops. The topic of Etsy Facilitates has an average of 27.57 responses. The topic of Operation of Etsy Shops has an average of 23.02 responses. The difference is roughly 4.5 responses. Based on the result of the first test, the null hypothesis is that the two topics of Etsy Facilitates and Operation of Etsy shops have the same responses.
For testing the null hypothesis, I conducted an independent-samples t-test. Table 4 shows the results of the independent-samples t-test for the two topics.

### Table 4: Independent Samples T-Test between the two topics

In accordance with Table 4, the result of Levene’s test for the quality of variance is not applicable to this case because the two tested topics have different variances. According to the t-test, the chance of finding the difference between the two means is about 59%. Since this chance is too large, I rejected the hypothesis that the topic of Etsy Facilitates has the same responses of the topic of Operation of Etsy. Regarding two-tailed P-value, there is a 29.5% chance of finding a mean difference smaller than -4.5 responses and another 29.5% chance for a difference larger than 4.5 responses. Therefore, on average, the topic of Etsy Facilitates has more responses than the topic of Operation of Etsy Shops; t(177)=0.540, p=0.59.

<table>
<thead>
<tr>
<th>Group Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUESTIONS</td>
</tr>
<tr>
<td>REPONSES</td>
</tr>
<tr>
<td>Question</td>
</tr>
<tr>
<td>Non-Question</td>
</tr>
</tbody>
</table>

Table 5 shows the different means of responses between Question content and Non-Question content. The question content has an average of 24.50 responses. The non-question content has an average of 22.30 responses. The difference is roughly 2.2 responses. Based on the result of the descriptive test, the null hypothesis is that the question content has the same responses of the non-question content.

Table 5: Statistical Test between Numbers of Responses and Categorizing Contents

For testing the null hypothesis, I conducted an independent-samples t-test. Following Table 6 shows the result of the independent-samples t-test for the two categories.
### Independent Samples Test

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.116</td>
<td>.734</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.34</td>
<td>9</td>
</tr>
</tbody>
</table>

**Table 6**: Independent Samples T-Test between Question content and Non-Question contents

In accordance with Table 6, the result of Levene’s test for the quality of variance is not applicable to this case because the two tested topics have different variances. According to the t-test, the chance of finding the difference between the two means is about 72%. Since this chance is too large, I rejected the hypothesis that the question content has the same responses of non-question content. Regarding two-tailed of P-value, there is a 36% chance of finding a mean difference smaller than -2.20 responses and another 36% chance for a difference larger than 2.20 responses. Therefore, on average, question content has more responses than non-question content; t(193)=0.36, p=0.72.

### QUESTIONS * SECOND CYCLE CODING (TOPICS) Cross tabulation

<table>
<thead>
<tr>
<th>Questions</th>
<th>Etsy Facilitates</th>
<th>Operation of Etsy Shops</th>
<th>Non-Codeable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions</td>
<td>17 (56.67%)</td>
<td>100 (67.11%)</td>
<td>9 (42.86%)</td>
<td>126 (63%)</td>
</tr>
<tr>
<td>Non-Questions</td>
<td>13 (43.33%)</td>
<td>49 (32.89%)</td>
<td>7 (33.33%)</td>
<td>69 (34.5%)</td>
</tr>
<tr>
<td>Non-Codeable</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>5 (23.81%)</td>
<td>5 (2.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>30 (100%)</td>
<td>149 (100%)</td>
<td>21 (100%)</td>
<td>200 (100%)</td>
</tr>
</tbody>
</table>

**Table 6**: Cross-tabulation between Categorizing Contents and Second Cycle Coding Categories

In accordance with Table 6, using cross tabulation compares the two topics between Etsy Facilitates and Operation of Etsy Shops on the categorized contents (e.g. Questions,
Non-Questions, and Non-Codeable). Generally, the Question contents are the dominant percentage (63%) in posts. Comparing the two topics, the topic of Operation of Etsy Shops has more Question contents (67.11%) than the topic of Etsy Facilitates (56.67%). However, the topic of Etsy Facilitates does not have significantly different percentages between Question contents and Non-Question contents.

5.3 Results

Briefly, I will describe the results of the two analyses. The First Analysis is based on the content analysis. This analysis focuses on the frequency of quantitative output from qualitative coding. Thus, the most frequent topic in Level 3 categories is ‘Character of Items’, which counted 39 units. Unlike the result of Level 3 categories, the most frequent topic in Level categories is ‘Sales’, which counted 76 units. Regarding the results of content analysis, users of the Etsy Discussion forum have a tendency to share issues, related to describe their products to sell and operating their shops.

By using SPSS statistic program, I conducted the Second Analysis. It is focused on the tendency of both users (e.g. creators and respondents). Therefore, I carried out three statistical tests. Firstly, an independent-samples t-test was conducted to compare the number of responses in the topic of Etsy Facilitates and the topic of Operation of Etsy Shops. There was a significant difference in the scores for the topic of Etsy Facilitates (M=27.57, SD=42.39), and the topic of Operation of Etsy Shops (M=23.02, SD=41.98) conditions; t(177)=0.540, p=0.59. These results suggest that the topic of Etsy Facilitates has more responses.

The second independent-samples t-test was conducted to compare the number of responses in the Question content and the Non-Question content. There was no significant difference in the scores for the Question content (M=24.50, SD=39.24), and the Non-Question content (M=22.30, SD=43.46) conditions; t(193)=.36, p=.72. These results suggest that the Question content has slightly more responses.

By using cross tabulation, the Question content has dominant percentages in both topics, at 63%. However, this difference in the topic of Etsy Facilitates was not significant, in which the Question content is 56.67% and Non-Question content is 43.33%.
6. FINDINGS

After conducting the two analyses, I can draw conclusions about the attitude of creators and the tendency of both creators and respondents in Etsy Discussion forum. The first analysis focuses on the tendency of creators by counting the most frequent topics in level 3 and level 2 of Codebook. In order to build Codebook, I used inductive category development through First Cycle Coding. After creating categories in Codebook, I classified the coded units into developed categories based on the deductive category application process.

Regarding the most frequent topics in level 3, the highest priority of creators is to describe their products to sell on Etsy marketplaces (i.e. other sellers or users who are using Etsy platform). After this priority, creators are also concerned about the status of sales and views on their shops, the topic with the highest frequency of negative words. Furthermore, this topic is linked to the third most frequent topic ‘Promotion on Social Media’. In other words, I assumed that the tendency of creators is to describe their problematic situation and to find a solution that advertises their shops or products. Also, the most frequent topics in level 2 are also the most frequent topics in level 3. Overall, the priorities of creators in the Etsy Discussion forum are to describe their selling products to sell in the marketplace and to improve sales of their products in some way (e.g. listings, pricings, improvements, etc.).

The first analysis focuses only on the perspective of creators who post in the Etsy Discussion forum. On the contrary, the second analysis focuses on the interaction of both creators and respondents. Based on the numerical data, it concentrates on the relationship between numbers of responses and the most frequent topics, coded by Second Cycle Coding. The first result is that the topic of Etsy Facilitates has more responses than the topic of Operation of Etsy Shops. This means that the tendency of creators is to discuss the Operation of Etsy Shops but the propensity of respondents is to comment on the Etsy Facilitates. The second result is that question content has more responses than non-question content on average. This interprets that the respondents tend to answer the question content. But the average differences between question content and non-question content is not significant and p-value is too large in order to assume the propensity of respondents on the question or non-question contents.
6.1 Limitations

Web-based contents allow users to express their own concerns, ideas, and information. Qualitative content analysis can be employed on such data in order to find out attitudes and the degree of interaction among users.

My empirical research showed up issues that need careful consideration and preparation in these situations. Firstly, sampling and sampling size pose some challenges. Which units need to be identified for sampling will be determined by the combination of research methods. In my study, a single post is a sampling within the particular time frame. However, in conducting qualitative content analysis, the unit of coding is not a single post. Therefore, a single post was coded for multiple topics in First Cycle Coding. It was complicated situation because the sample size between the quantitative data and qualitative data was different. For this reason, I conducted extra coding procedure, the Second Cycle Coding, to allow for the comparison between quantitative and qualitative data.

Secondly, due to lack of resources and time, an inter-coder was absent in my empirical research. In most classical content analysis, the role of the inter-coder is to test coding category and codebook for reliability. Alternatively, the design of qualitative content analysis is based on an inductive category development and a deductive category application. Thus, the created Codebook was developed from the original contents and coded units were analyzed by developed categories. This interchangeable procedure minimizes the risk of unreliability.

Thirdly, data collection also has potential problems. All raw data sets were manually printed as PDF files from the original website. This means that the extracted data are ‘frozen in time’. The selected sampling posts on Etsy Discussion forum can be changed by creators, respondents, and Etsy staffs. Therefore, collected data for my empirical research may have been changed by times.

Lastly, the sample size and variance between two categories are different while using independent-samples t-test in SPSS. Normally, it is not acceptable to compare two means of categories. However, regarding Welch’s t-test, unequal variances samples are acceptable when comparing central tendency for two unrelated samples (Ruxton, 2006).
7. DISCUSSION

A combined quantitative and qualitative research method is important to my empirical research. In accordance with literature about content analysis, the major goal in conducting content analysis is to make inferences by systematically and objectively identifying specified characteristics within a text (Macnamara, 2005). Simply, the research method of content analysis is different from qualitative research methods because it relies on scientific methods to measure qualitative data. One of the prominent researchers, Neuendorf (2002), suggested the integrative model of content analysis, in which a range of methodologies can be used for text analysis in basis of a narrow definition of content analysis (Neuendorf, 2002, p.41). Thus, classical content analysis focuses mostly on the frequencies of topics or words to assume the pattern of qualitative data. Also, to measure qualitative data, categories are already built based on theories and methodologies. However, regarding the characteristic of web-based contents, it was challenging to build firm categories to classify the qualitative data.

Unlike classical qualitative content analysis, Mayring (2000) suggested the inductive approach to design the qualitative content analysis (Mayring, 2000). This literature inspired the building of inductive category development to measure the qualitative data. Therefore, I conducted First Cycle Coding for creating Codebook and for applying coded units within the Codebook.

Focusing on not only qualitative content analysis procedure, but also using quantitative data, allowed my empirical research to provide another perspectives, which helps expand the analysis of both creators and respondents. Using a combination of quantitative and qualitative approaches in my empirical research is more useful for social research with a wide perspective (Creswell and Plano Clark, 2007). For this reasons, my empirical research is designed to focus more on qualitative research to analyze web-based contents. For more understanding, analyzing quantitative data is conducted in the second analysis.

After reviewing relevant literature, the content analysis is conducted under a quantitative research method or a qualitative research method. Therefore, the most important is how to structure research design with a strong conception of the researcher. Therefore, my empirical research is designed to focus more on qualitative research method to analyze the web-based contents. For more understanding, analyzing quantitative data is conducted in the second analysis. Therefore, my research is designed as a jointly qualitative and quantitative method in order to analyze the web-based contents.
8. CONCLUSION

Studying web-based contents has been popular in order to analyze the propensity of users on the Internet. The online platform ‘Etsy’ is one of the interesting marketplaces for creative industries. Unlike Amazon or eBay, Etsy focuses only on the particular online marketplaces (e.g. crafts, vintage items and custom-products). Most participants are young designers, start-ups, and cultural entrepreneurs. The Etsy platform offers lower costs of entering marketplaces and supports facilitates for microbusiness entrepreneurs. It is not only providing marketplaces but also building community where Etsy members participated in. Etsy Community is a strong channel to interact between members for sharing a buying, selling or manufacturing. This characteristic is linked to the concept to ‘sharing economy’, which creates markets in sharing by facilitating exchanges based on community-based. This is the reason why Etsy Forums are active and Etsy users actively participated in Forums. In my research paper, Discussion forum is studied to analyze the propensity of Etsy users.

The design of my empirical research is based on content analysis. Many academic literatures on content analysis have suggested divers formation of designing empirical researches. The most important feature of empirical research design is to set up a strong goal what the empirical research wants to find out. In other words, a clear purpose of research is significant to determine the research methods. In this research, the purpose was clear to study the propensity of Etsy users with a combined quantitative and qualitative research method. The mixed form of research has more chances to study various perspectives. Thus, my empirical research wanted to achieve finding the propensity of creators and the interaction of both creators and respondents through analyzing contents on Etsy Discussion forum.

Analyzing Etsy Discussion forum, I have some challenges to conduct my empirical research. One of the challenges was to create a Codebook. My empirical research was not designed along the lines of classical content analysis. Thus, categories of Codebook were inductively developed under descriptive coding scheme (i.e. First Cycle Coding). Another challenge is an absence of inter-coder in my empirical research due to lack of resources and time. In most classical content analysis, coding categories and codebook are tested by inter-coder for reliability. For this reason, the developed categories from the original contents minimized the risk of unreliability.

To achieve the goal, I conducted two analyses under qualitative content analysis and statistical tests. After completing two analyses, I found out the most frequent topic of creator by qualitative content analysis and the interaction between creators and respondents by using...
SPSS test. According to the results, two aspects are figured out. The priority of creators is to describe their products to sell in the marketplaces, which means that creators want other users to confirm whether their products are possibly sold. Both creators and respondents tended to discuss the topic of Etsy Facilitates than the topic of Operation of Etsy Shops.
10. REFERENCES


