

A Study of Interactive Qualitative at Online Shopping Behavior

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Abstract: - As the information age arrives and the internet network has very popular day by day. Internet network has already become quite important activity in people's daily life. The research shows that there are more than 650 million non-repeating users shop on line, including shopping center websites and sub channel. According to network auction and relevant literature of network marketing, the behavior that consumers adopted the network platform and e-shopping has been common in recent years. This paper focuses on the interactive qualitative at online shopping behaviours, and in this study, the research purposes are as follows: First, by the transaction costs theory to probes into users' attitude of online shopping behaviors to influence users' using wills. Second, with IQA, focus group deeply interview, probes into the real demands of e-shoppers. Third, carrying on the different ethnicities users and probing into its different attitude and using aspiration. This research finds out the common experience in group's interview, and through affinity and theoretical coding. Finally, we find that the behavior of purchasing on line, there was a huge different between men and women. Girls think interface designing and security are important reasons to influence other factors. Men, then, think interfaces designing and after-sale service are more important. Based on the considered relation, women obviously have priority relation. Besides interface designing, groups have no connection. It is obviously men and women have loud difference to influence e-shopping behaviors.

Key-Words: Interactive Qualitative Analysis (IQA), On-line shopping, transaction cost, Interactive qualitative research

1 Introduction

1.1 Research background and motivation

The population of using network is rising year by year because of the network prevailed. The maturation of e-commerce environment makes the business opportunity of the network limitless. According to network auction and relevant literature of network marketing, the behavior that consumers adopted the network platform and e-shopping has been common in recent years. But the mechanism of network shopping is often interfered by the human factors. Network platform manufacturer is hard to grasp consumers' behaviors and intentions. Moreover, confusing marketing methods leads e-shopping is hard to be flourishing development. In addition there are a few quality researches in consumers' points of view in behaviors of e-shopping. Thus, this research will study interactive qualitative research, IQA and combine with Theory of Transaction Cost, TCT. Regarding domestic university student as the research objects and selecting the graduate student with e-shopping

experience to make up the member of community probe into the model of consumers vs. e-shopping platform. This research finds out the common experience in group's interview, and through affinity and theoretical coding. It will see relatively the representative affinities including convenience, interface, procedure design, freight charges, security and after-sale service, etc. Last, through group composition form finishes the analyzing among the relation of every affinity. As the information age arrives and the internet network has very popular day by day, there are a lot of characteristics in internet networks, including convenient, boundless, costless, etc.). According the survey of EC/ACI, there has been over 1083 hundred thousand people use internet in Taiwan. Generally, people who surf on the internet for 6-10 hours occupied 19%. And people who exceed 56 hours are up to 11%. Internet network has already become quite important activity in people's daily life. According to the ARO survey (Access Rating Online) of insight explorer reveals that students are the highest job identity population who are over 10 years old in Taiwan. The rate of surfing

has already been up to 88%. Thus, the research objects regards studying students in the university as group's interactive research object. The research shows that there are more than 650 million non-repeating users shop on line, including shopping center websites and sub channel. Within a matured internet network environment and limitless business opportunity of the network, every organization or company tries to expand the network market, timeless and boundless internet network. Without virtual shops but with advantage of convenience, e-shopping is the directly way to make profits. This research will further understand what kind of environment of shopping at network, the mechanism or factor can attract the network user to have wills to surf on line. Besides, the reasons can then improve the success rate of the e-shopping trade and impel e-commerce to grow vigorously even more. The instrument in this research, this study uses IQA (Interactive Quality Approach) to adopt. From experienced people who have practice experience on e-shopping open a conversation among groups and offer valuable explanations and information analyzing to have a key which influences behaviors of e-shoppers. Therefore, it will reach the win-win chance between suppliers and consumers in the network trade platform.

1.2 The purpose of research

The concrete purposes in the study are as follows: First, by the Transaction Costs Theory to probes into users' attitude of online shopping behaviors to influence users' using wills. Second, with IQA, focus group deeply interview, probes into the real demands of e-shoppers. Third, carrying on the different ethnicities users and probing into its different attitude and using aspiration.

2 Literature Review

The definition of online shopping is the process consumers go through to purchase products or services with interactive shopping over the Internet. The interactive shopping is the behavior that the two-way communication between buyers and sellers interact on each other's reaction time and response situation. Because of network borderless characteristic, the proportion of online shopping in consumer market certainly will more and more competent to expand. The behavior of network purchasing is one of e-commerce, including activity of B2B (Business to Business), B2C (Business to Consumer) C2B (Consumer to Business) and C2C (Consumer to Consumer). The chart is shown as

Figure 1. Online shopping is a channel of agreement that using network as buying and selling and making a contract. Online shoppers can implement the trading activity when they surf at home. There are several advantages, such as various products, clear order ways, amount of trading money, delivery, appreciation and returning goods and guarantee etc. The trading course of on line shopping mostly adopts the booking type of single way reservation at present. The provider finishes the webpage and makes the agreement contents in advance. Then be erects and be chosen on websites by consumers. It can be seen that the online shopping offer the best shopping channel to home-confined consumers.

So the online shopping is a virtual store in the internet network. Suppliers usually utilize relevant technology of multimedia put images and photos on the computer. Besides, they offer goods service and offer and order on Internet in order to reduce the management cost the shop and store the space. All the trading procedures such as surfing, ordering, paying the bill, and deducting will finish in Internet. The service of online shopping offers 24 hours a day and seven days a week at present. It has broken the limitation of national boundaries and consumers can also buy any commodities or services thought of to foreign countries through the network. Furthermore, online shopping offers the secondhand auction information to do shopping abundantly, no matter what you want to buy or want to sell, there is a convenient, cheap channel that can do a deal.

Type Of E-Commerce Participation	Offering Business	Offering Consumer
Business	Business to Business (B to B or B2B)	Consumer to Business (C to B or C2B)
Consumer	Business to Consumer (B to C or B2C)	Consumer to Consumer (C to C or C2C)

Figure1. The business activity chart of consumer to business

2.1 Theory of transaction cost

To find out the behaviors and motivations of online shopping, the research studies and reveals according to relevant literatures, the network trade is a one of e-commerce. Online shopping and online trade have sizable relations with the transaction cost. From the theory of transaction, according to relevant research of literature, scholar Williamson (1975) points out that human nature factors and trade environment

always influence lead to the market does not work dynamically, and cause the difficulty of marketing and produce the transaction cost [4]. In addition, scholar Das et.al [6] analyzed with theory of transaction cost that customer serve the satisfaction of science and technology's contracting- out. In addition, scholar Work uses the theory to study and evaluate the relevance of enterprise's procedure of assessment [21]. Scholar Lee et.al utilizes the theory of the transaction cost to probe into the reason why internet network users will call on the virtual store again [15]. Last scholar Liang et.al probes into which goods suit for online selling with the theory of the transaction cost [14]. Relevant articles in application of TCT was shown in Table 1.

Overall, depending on literatures described above, theory of transaction cost is usually employed to regard as analyzing tool of online shopping of information system. Coase [4] even pointed out the reason why the existence of the manufacturer. Because of exercising the price function will produce the transaction cost; the manufacturer will have benefit to set up. Through the discussion and summing up of the literature, the scholars think the theory of transaction cost is suitable for probing into the behavioral characteristic of online shopping. This research places transaction cost theory as main shaft and through IQA study the behavior of shopping at network. That is the interactive course of dealers and behavioral users of shopping.

Table1. Relevant articles in application of TCT

Source	Research topic and content	Research field
O. E. Williamson (1975)	human nature factors and trade environment influence lead to the market does not work dynamically and cause the difficulty of marketing and produce the transaction cost	Information management
J. Lee, J. Kim and J. Y. Moon	utilizes the theory of the transaction cost to probe into the reason why internet network users will call on the virtual store again	Information management
A. Das, C. Soh and P. Lee	theory of transaction cost that customer s serve the satisfaction of science and technology's contracting-out	Information management
T. P. Liang and J. S. Huang	which goods suit for online selling with the theory of the transaction cost	Information management
Jurison and Clemons and Row(1995)	Discuss the outside risk of the information system with views of modern financial theory and the theory of transaction cost	Information management
Alpar and Shaharia	According to the concept of the theory of transaction cost, the decision making procedure of information system's OEM	Information management
Coase(1937)	Why the existence of the manufacturer. Because of exercising the price function will produce the transaction cost; the manufacturer will have benefit to set up.	Information management
Clemons, Reddi, and Row(1993)	Consult the theory of transaction cost and relevant management literatures and point out the possible source of the speculative risk	Information management

2.2 Interactive qualitative research

In the quality research approach including interview, observation, focus group discussion, literature, ethnography, history study, grounded theory, narrative analysis, action research, and multi-methods etc. IQA (Interactive Qualitative Analysis) is QA idea stemming from TQM. In the field of information management, it is a qualitative research approach of interactive type. The purpose of IQA is for some experienced people to find out some keys of the problem through this kind of interactive process. In general scholars' research, IQA often applies to construct Theory or Model. Bann et.al pointed out IQA is a systems approach to qualitative research that has been successfully applied in various tasks [23].

IQA is a method of qualitative analysis and data collection. IQA uses the colony focusing to real present participants' experiences and all representative research problems through face to face interview and thinking concentrate. This has collected and thought practice of wide purpose fully grasps its result degree of content. Scholar Northcutt point out the purpose of IQA is to make a link between the similarity and relation of a phenomenon and meaning [30]. It's belongs a qualitative analysis that uses observation, interview, or data collection to analyze. The research approach of IQA is not just a quality or quality of every project and a setting up in the thought or systematic theory completely. The method includes the dialectical logic of various fields, grounded theory, concept map, action research, total quality management, social reality of construction, and after the society more. One of purposes of IQA in a book is to set up a phenomenon of picture. The author describes IQA is a process that is "the beginning of high rate of researchers' participation" (design) among a series of development for the book. Reducing its data collection is belong one relatively analyzing (mainly the agreement or rule is being driven), and increasing at explaining stage. Northcutt et.al [30] point out the key function of IQA is to find new point, data collection and directly participant in creating and producing. The model that its course forms is a key.

When the practiced operation of IQA and usually look at the characteristic of the topic, the convener convenes a group with professional experience and hosts starts IQA meeting and announces that makes a speech to the question, require group considering and using the panel discussion. The key group participates describe the subsequent story in their

way. This special project group participates in a silent problem research of absorbing all the useful ideas in the course, writes one's own thinking index card, and sticks it on the wall. Afterwards, it then can produce a large number of materials [30].

2.3 Determining to using IQA reason

IQA (Interactive Qualitative Analysis) is a qualitative data-gathering and analysis process which depends heavily on a group process to capture a socially constructed view of the respondents' reality through the focus groups. The methods assist members of a group close to a phenomenon of interest in describing and labeling their experiences, and in articulating perceived relationships among these experiences to produce a theory in perception or a conceptual map. Scholar Kruege pointed out IQA study begins with a focus group, the focus group is a small, homogeneous group of people who possess certain characteristics, sharing some experiences and perspectives, or a similar background, who are purposefully selected by the researcher to address a specific topic [22]. Interactive Qualitative Analysis (IQA) is a systems approach to qualitative research that has been successfully applied in various tasks [23]. According to the literature reviews, this study focus on IQA and aim at formed with group of individuals who have similar background and share some common experience, we can grasp consumers' behaviors at online shopping.

3 RESEARCH METHODOLOGY

In quality research, it uses grounded theory and interactive focus group. This research uses the interactive quality approach (IQA). To the different view of the cognition and trading experience of the online shopping users, the study discuss the key factor of the consumers' online shopping wills through analyzing of Affinity of IQA.

3.1 IQA Research approach

The research approach adopts Interactive qualitative research, IQA and through focus group members to interview and implement materials collection and sort out. During the interview and interact with focus group, the researchers introduce the concept and let the focus group write down the ideas and concepts about the research theme. Then through the constantly talk and idea clarified form parameter and factor to do further research. The research approach flow is shown as Figure 2.

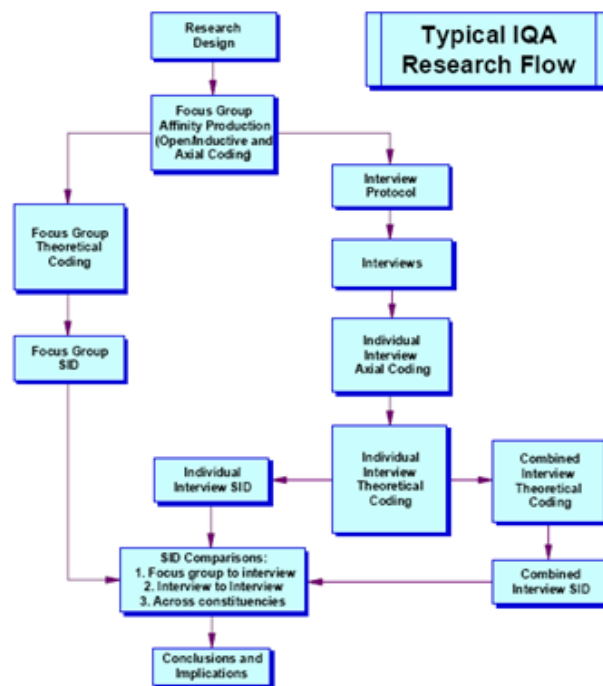


Figure2. IQA Research Flow (Norvell et.al 2004)

3.2 Instrument

Inductive and Axial Coding, this research selects focus group members. It is consisted of four graduate students in department of technology management who have experience of online shopping. Each person gets a form, and researchers prove that clearly purpose and carries on the course. During the filling out the form, most members unable to fill-up 25 concepts. However, if they were unable to express, it's necessary to fill in. In addition, researchers put similar words and concept together and carry on a step of main shafts codes first through discussion. It then has formed nine classifications. Afterwards, by this nine concepts made up of six main Affinities. Coding schedule of the main shaft was been done.

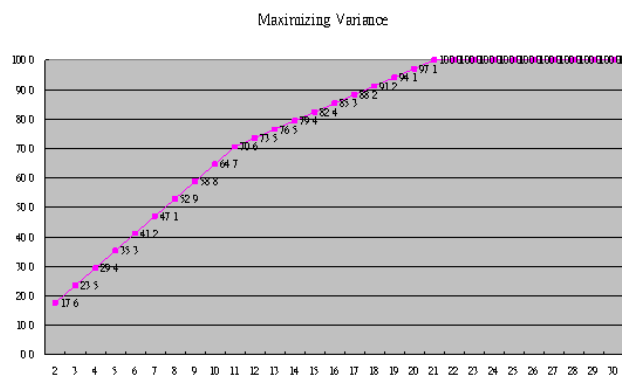


Figure3. variance accounted for by each succeeding relationship

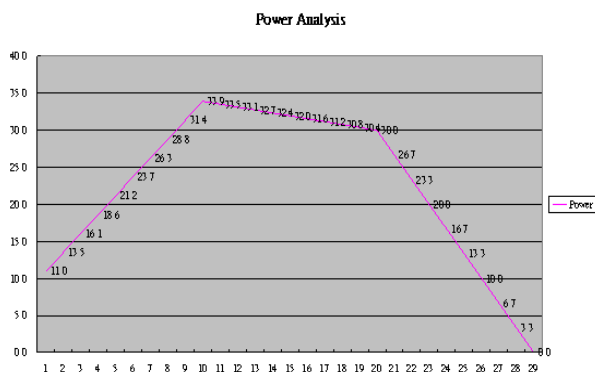


Figure4. Power analysis for the system

Table 2 Theoretical Code Frequency Table

Affinity Pair Relationship	Frequency	Theoretical Code
convenience → security	3	convenience → security
convenience → security	1	
convenience → design of interface and flows	4	convenience → design of interface and flows
convenience → design of interface and flows	0	
convenience → after-sale service	2	convenience → after-sale service
convenience → after-sale service	1	
convenience → deliver fee	2	convenience → deliver fee
convenience → deliver fee	0	
Convenience → new and fashion shopping	2	Convenience → new and fashion shopping
convenience → new and fashion shopping	1	
security → design of interface and flows	0	security → design of interface and flows
security → design of interface and flows	2	
security → after-sale service	1	
security → after-sale service	0	
security → deliver fee	0	
security → deliver fee	1	
security → new and fashion shopping	2	security → new and fashion shopping
security → new and fashion shopping	0	
interface and flows → after-sale service	2	design of interface and flows → after-sale service
interface and flows → after-sale service	0	
design of interface and flows → deliver fee	1	
design of interface and flows → deliver fee	0	
interface and flows → fashion shopping	2	design of interface and flows → new and fashion shopping
interface and flows → new fashion shopping	1	
after-sale service → deliver fee	1	
after-sale service → deliver fee	0	
after-sale service → new fashion shopping	2	after-sale service → new and fashion shopping
after-sale service → new fashion shopping	1	
deliver fee → new and fashion shopping	1	
deliver fee → new and fashion shopping	1	

Through the above table to find out the relationship between Affinities, it was described by table 2 and through table to decide the main and secondary relation of influence and be influenced. In Table 4 shows as Tentative SID Assignment.

3.2 Focus group and theoretical coding

The Affinity gets from coding schedule of the main shaft I focus group. Focus group will use arrow to represent the relationship among Affinity, theoretical coding. The ART (Affinity Relationship Table) is to find out representative affinities from numerous. Affinities, there is a basic analysis

among every affinity through Group Composition to finished. Then it uses Frequency in Affinity Pair Order form to calculate the number of times that influences the relation. Maximizing Variance and Power Analysis help us to find $ency \geq 2$ out critical point of affinities such as Figure shown. To find out the best effect and consider time and economic cost, the highest point of Power Analysis1 usually is how we decide the critical point of Affinities. Through Power Analysis, the research takes Relationship Pair as Frequency shown as Table 2. Table 3, shown as Tabular IRD-1(Interview). Table 3, shown as SID Assignment. Figure 4, shown as variance accounted for by each succeeding relationship, Figure 4, shown as Power analysis for the system, Figure 5, shown as Cluttered SID, Figure 6, shown as Uncluttered SID.

Table 3 Tabular IRD-1(Interview)

Interviewee -1 (Male)									
	convenience	security	Design of interface	After-sale service	Deliver fee	Out	In	Δ	
Design of interface	↑	↑					2	0	2
convenience		↑	←				1	1	0
After-sale service		←			↑		1	1	0
security	←		←	↑			1	2	-1
Deliver fee				←			0	1	-1

Table 4 Tentative SID Assignment

Design of interface	Primary Driver
convenience	Circulator
After-sale service	Circulator
security	Secondary Outcome
Deliver fee	Primary Outcome

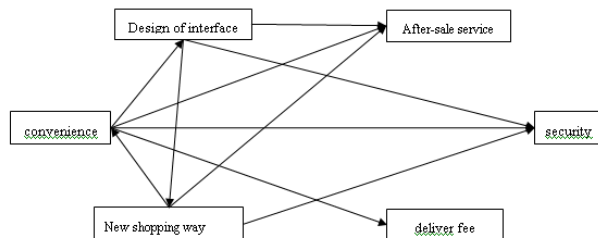


Figure5. Cluttered SID

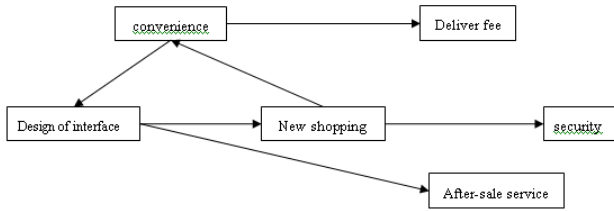


Figure 6. Uncluttered SID

4 Results and Analysis

This paper focuses on the the key factors of Influence Consumer Online Shopping behavior and Based on Application IQA method, the analyst by using the IQA approach to the dialogue and discussing the divergence between man and woman. Table5. shown as Frequency in Affinity Pair Order. Table6. shown as Combined IRD(MEN). Table7. shown as Combined IRD(WOMEN). Tale8.shown as Tentative SID Assignment, Figure7.shown as Cumulative Percent (Frequency), Figure8.shown as Power Analysis, Figure9.shown as Cluttered SID (MEN), Figure10.shown as Cluttered SID (WOMEN), Figure11.shown as Uncluttered SID (MEN), Figure12.shown as Uncluttered SID (WOMEN).

4.1 Target interview

There are two purposes of interview. First, Confirm whether Affinity term developed from the focus group is representative. Second, By the relation between Affinity that interview establishes, if there is any differences with focus group set up. This research selects graduate and undergraduate students in department of information management to have a deeply interview. The interview follows all the questions in sequence. Course makes the recording of the whole journey in order to help draft transcribe word for words, and avoid any words missing. Five content summaries of interview are as follows. It appears if all interviewee understand and admit the Affinity focus group developed and the relation between Affinities.

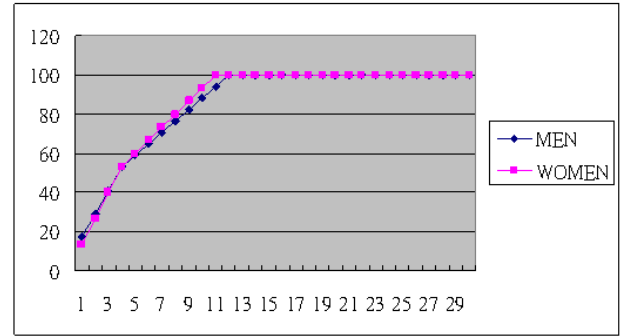


Figure 7. Cumulative Percent (Frequency)

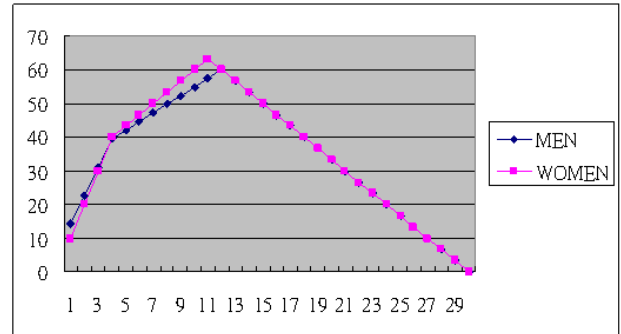


Figure 8. Power Analysis

Table 5. Frequency in Affinity Pair Order

	MEN		WOMEN	
1	convenience ← interface designed	3	convenience ← security	2
2	convenience ← security	2	convenience ← interface designed	2
3	security ← interface designed	2	convenience ← after-sale service	2
4	after-sale service → deliver fee	2	convenience ← deliver fee	2
5	convenience → after-sale service	1	security ← interface designed	1
6	convenience → deliver fee	1	security → interface designed	1
7	interface designed ← after-sale service	1	security → after-sale service	1
8	security → after-sale service	1	security → deliver fee	1
9	interface designed → new shopping	1	interface designed → deliver fee	1
10	after-sale service → new shopping	1	interface designed ← after-sale service	1
11			after-sale service ← deliver fee	1

Table 6. Combined IRD (MEN)

Males	convenience	security	Interface designed	After-sale service	Deliver fee	new shopping	Out	In	Δ
Interface designed	↑	↑				↑	3	0	3
After-sale service					↑	↑	2	0	2
Security	↑		←				1	1	0
Deliver fee				←			0	1	-1
convenience		←	←				0	2	-2
new shopping			←	←			0	2	-2

Table 7. Combined IRD (WOMEN)

Females								
	convenience	Security	Interface designed	After-sale service	Deliver fee	Out	In	Δ
Security	↑			↑	↑	3	0	3
Interface designed	↑			↑	↑	3	0	3
After-sale service	↑	←	←		←	2	2	0
Deliver fee	↑	←	←	↑		2	2	0
convenience		←	←	←	←	0	4	-4

Tale 8. Tentative SID Assignment

(MEN)		(WOMEN)	
Interface designed	Primary Driver	Security	Primary Driver
After-sale service	Primary Driver	Interface designed	Primary Driver
Security	Circulator	After-sale service	Circulator
Deliver fee	Primary Outcome	Deliver fee	Circulator
convenience	Primary Outcome	convenience	Primary Outcome
New shopping	Primary Outcome	New shopping	X

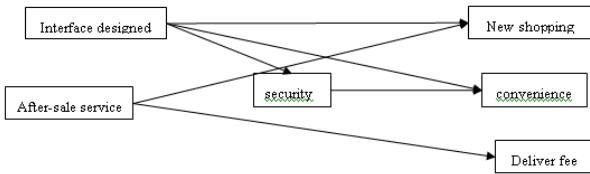


Figure 9. Cluttered SID (MEN)

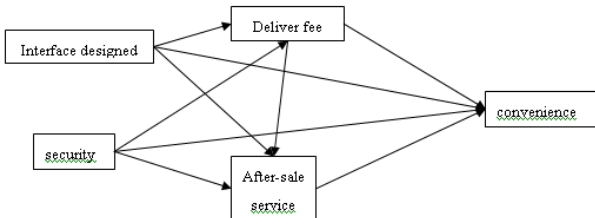


Figure 10. Cluttered SID (WOMEN)

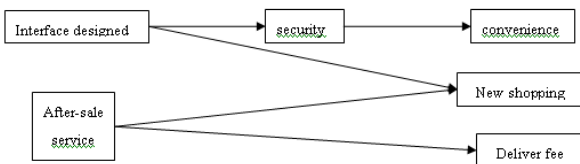


Figure 11. Uncluttered SID (MEN)

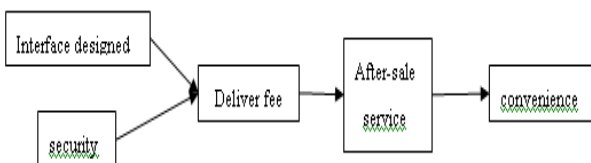


Figure 12. Uncluttered SID (WOMEN)

4.2 Affinity relationship

ART(Affinity Relationship Table) was set up by sorting out interview with Theoretical Coding. And then describe the relation that every Affinity mainly influences and influences through SID.

4.3 Set up the affinity relationship of group interviewee

Through the analysis described above, there are many differences in the views of five interviewees. Another purpose of this research also wonders if the gender difference will have differences for considering decisive factors to go online shopping. What will they be? The figure following is the combination of men and women's buying idea to compare the differences existed in the two groups

5 Conclusion

For the buying behavior online, the result finds two groups of men and women have huge differences that determine buying factors. Women think interface designed and security are two important factors to influence others. That means behavior of online shopping depends on interface designed on and the security of websites, other factors must all cooperate with these two points. Men think interfaces are designed and after-sale services are the main two reasons to influence online shopping. On the considered relation, women obviously relatively have priority relation, however, men starts to point out the interface designed and after-sale service. Except interface designed, two groups have no same parts. Therefore, it is obviously that men and women for influence online have quite differences. The whole research set out by the focus group activity in the beginning to receive convenience and security. However, there is quite different with the results from interview, all participant selected by focus group have real experience on shopping on line. Thus, focus on the convenience and security of the network mean that most users still hold their attitude on website's security. Interviewee may not have experience of shopping at network, so they are easy to be attracted by the interface designed. In addition, when focus group set up Affinities, it mentions new and fashion shopping (network auction) is one of the factors which attracts to online shopping. But interviewees do not nearly all approve this factor, it is unable to match in idea the group assumed.

6 Discussion

The quality research approach of IQA is rather complicated work for picking and fetching behavior and idea, but it can be expressed the result by figures. The decision of the suitable person of focus group and the researcher's guide may be the key factors that determine a study. In this way, it may cause the direction where the whole result will toward the researchers' expectation and let the result of study be too subjective and losing the meaning. In addition, while expressing a unrestricted or extensive topic of a range with term of 25, it is easy to cause a phenomenon that scattered and hard to

shape a concept. And even the focus group fills in 25 Terms will produce the some miscellaneous. There is no solution in IQA. Thus, it makes interviewees may be produced and puzzled the question during interview and then form the inconsistent result between the focus group and interviewee's concept. Make decision with the number of times while comparing the concept. If interviewees are an even will lead two opposite concepts have the same number of times which will be difficult to choose. This point is valuable experience found in the course of studying and it deserves the subsequent researcher's reference.

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