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A Study on Moment of Truth of Household Telecommunication and Distribution Services in Korea

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Abstract

Purpose – There have been not enough studies on the ways customer Moment of Truth(MOT) activities are structured along with consumption chain and their influences as well as the relative influences of service quality at Moment of Truth on customer performance. Therefore, customer service needs needed at Moment of Truth may differ depending on whether these distribution services are at introduction-growth stages or maturity-decline stage already, but there is no study which illustrates this.

Research design, data, and methodology – This study selects VoIP and IPTV as the household telecommunication and distribution services at introduction-growth stages as well as high speed internet and wire telephone as those at maturity-decline stages. Then it identifies which experiences that customers have at Moment of Truth by each service as well as the influences related to what the customers consider as important.

Results – As the result of demonstration with the target of 858 respondents, customers' experiences and requests differ at Moment of Truth. For service quality, what takes the positive roles in customer performance includes corporeality and certainty for the services at introduction-growth stages as well as reliability, sympathy, and mutuality for those at maturity-decline stages.

Conclusions – Implications of these results as well as further directions for study are suggested.

Keywords: Household Telecommunication, Distribution Services, Moment of Truth(Mot), Service Quality, Product Life Cycle(PLC).

JEL Classifications: L11, L15, L84, M15, M31.

1. Introduction

Modern society made change greatly owing to development and distribution of computer and Internet, Internet has been widely used to advance civilization of technology and to create new system and methods of the society and to have various kinds of communication means(Jung, Bae, & Yun, 2014).

In the era of information, Household telecommunication and distribution services mean the communication services used by customers at home. Its prime examples include wire telephone and high speed internet. Recently, internet TV(Internet Protocol TV, IPTV) and internet phone(Voice

over Internet Protocol, VoIP), of which services are enabled by high speed internet, have been introduced, so cable operators are competing intensely. These days, in the distribution market of household telecommunication services, convergence of broadcasting and telecommunication as well as cable and wireless happens rapidly due to its technical characteristics. Therefore, the boundaries among markets of related business operators are blurred thus resulting in more intense competitions(Choi & Yang, 2018). Consequently, business operators in the market are more fiercely doing their best to secure and maintain customers than those in any other markets. However, for distribution services in the mature stage, customers are not that aware of differences among brands due to standardization of technical characteristics. For the newly introduced services, customers' expectation of additional benefits due to severe competitions among business operators for service registration inducement, it is difficult to occupy competitive advantages only by differentiation on the core product level, including call quality, connection speed, and service coverage.

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In general, differentiation is possible based on all levels of products, including core products and expansion products. However, in the markets of mature stage with intense competitions as well as the in new markets of which products' technical innovation is difficult, competitions on the augment product level, including Moment of Truth interactions and other additional services, are known to play the decisive roles in inducing customers' purchase and satisfaction (Colgate & Alexander, 2002; Levitt, 1980; Storey & Easingwood, 1998; Wood, 1996). According to MacMillan and McGrath (1997), business operators can secure profitability by providing differentiated values which competitors cannot provide. Also, differentiated values can be provided not only through products or services but also at any Moment of Truth (An, Song, & Hwang, 2013). As a result, customers are not satisfied with only products' functions and convenience, but they appreciate the values on overall experiences of product consumption. According to Meyer and Schwager (2007), overall experiences of customers are defined as 'customers' internal and subjective reactions by direct or indirect contacts of business operators.' Direct contacts happen when customers purchase or utilize products while indirect contacts mean customers' accidental contacts with product, services, or brands by Words of Mouth (Baek, Shin, & Lee, 2016; Chen & Shang, 2018), recommendations, criticism, advertisements, and news.

Recently, Moment of Truth related distribution services in telecommunication market are limited to sporadic activities at the functional level as opening telecommunication services, after-sales services, and Voice of Customer (VOC) management thus not being able to stand out as the means to provide differentiated values. However, providing differentiated services at Moment of Truth is recognized as an important means for customer value creation due to intensification of competitions and enhancement of customers' expectations, so interests in ways to effectively and efficiently manage Moment of Truth are heightening. However, despite of these interests, researches on how the activities at Moment of Truth are composed of as well as how the activities at Moment of Truth and service quality at each stage are perceived by customers are insufficient. Especially, household telecommunication services are distributed all over the stages of Product Life Cycle (PLC) from the introduction stage to the decline stage thus showing different market & customer characteristics depending on stages, so different approaches are needed (Mahajan, Muller, & Bass, 1990; Rogers, 1984). Uniform Moment of Truth management and service provision no matter with market stages of telecommunication services make it difficult to expect enough effects of differentiation intended by business operators. Therefore, investigating types of Moment of Truth in distribution services and influence for customers depending on Product Life Cycle stages is an important research topic.

Consequently, this research aims at diagnosing customer

experiences and influence at Moment of Truth of household telecommunication services at different stages of Product Life Cycle as well as investigating differentiated influence by service quality at Moment of Truth on customer performances. VoIP and IPTV were selected as the household telecommunication and distribution services at introduction and growth stages. VoIP and IPTV were selected while high speed internet and wire telephone were chosen as the services at mature and decline stages. Depending on different services by stages, investigation about the kinds of customer experiences a Moment of Truth, including brand search, service registration, service usage, service continuation, and service discontinuation, was executed. Also, influence of the customer experiences was analyzed by figuring out which of them are considered as important by the customers. As a result, this research suggests strategic methods for effective Moment of Truth management and implications for customer value enhancement by discussing which activities at Moment of Truth are required and needed to be revised for each stage of these services as well as different service qualities at Moment of Truth needed to be emphasized depending on each stage.

2. Literature Review

2.1. Current Status of Household Telecommunication and Distribution Services in Korea

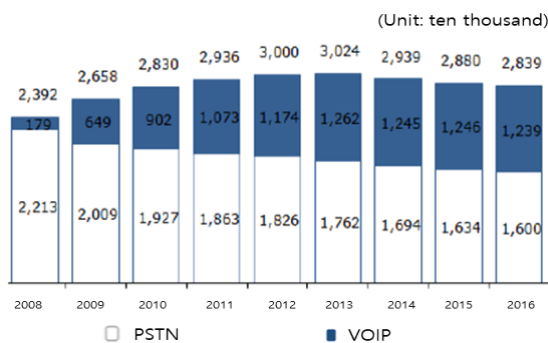
Representative household telecommunication and distribution services include wire telephone, high speed internet, and IPTV. In Korea, KT Corporation, SK Broadband, and LG Corporation are competing intensely in the market. These markets are one of the most turbulent market environments today due to increased competition. Marketers have special interest in consumer buying decision process and the factors that determine consumer choices among different brands (Rahman, Ismail, Albaity, & Isa, 2017).

As IP technologies develop, IP convergence of telecommunication distribution and broadcasting services speeds up. High speed internet is settled as an important telecommunication infrastructure which conveys audio, video, and media services. Therefore, competition for share expansion of internet distribution market is severe, so lots of combination products of which bait products are VoIP and IPTV are introduced. Competition for service registration inducement is getting more intense mainly based on various combination products interconnected with customers' needs for reduction of telecommunication fees. In addition, the focus of competition in the market is changing from single products to combination products. Also, the competition is changing from among companies to among group companies.

Market sizes of internet and mobile services are growing but the size of wired communication services is downsizing gradually(Song & Lee, 2018). The growth rate of service registration of wire phone had been smaller than that of the number of households since 2005. From 2007, wire phone entered the decline stage of Product Life Cycle with the decrease in the actual number of customers and traffic. This is caused by attacks of mobile phone and VoIP which means replacement of wire phone by mobile phone as well as penetration of VoIP.

Replacement of wire phone by mobile phone is speeding up due to the decrease in the gap between their fees derived by more than 90% of mobile phone penetration, structure change of household and family(increase in households of one person and two-income couples), and the decrease in mobile phone fees(exclusive payment plan for elementary school students or teenagers, inter network discount). The main focus for replacement of wire phone by mobile phone is changing from call replacement to registration replacement.

VoIP is attracting paid, domestic and overseas rates, and paid internet distribution market. Due to the reduction of the difference in quality between the PSTN(Public Switched Telephone Network) landline telephone and the internet telephone and the conversion barrier, the number of Internet telephone accesses is increasing, and as the substitution between PSTN landline telephone and Internet telephone increased, both services are judged as substitutes not complementary goods. Especially, since the number portability started in October 2008, the transition from the landline phone market to VoIP is accelerating. In 2009, Internet phone users began to outpace the landline phone users in terms of new subscribers.

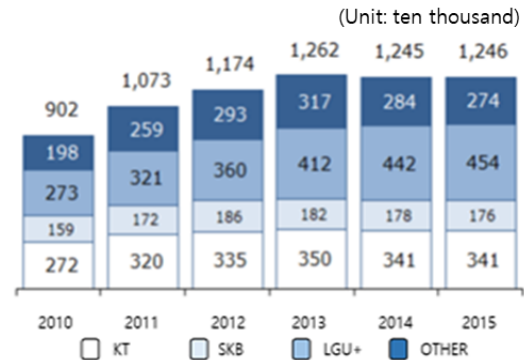


Source: Korea Information Society Development Institute(2016).

<Figure 1> The number of Landline phone users vs Internet telephone users

LGU+ launched myLG070 in the second half of 2007 and succeeded in preempting subscribers in the early VoIP market with attractive marketing such as offering cheap rates, free machines and various promotions. By the end of 2015, LGU+ subscribers were 4,540,000, which is increased

2.6%(120,000) compared to the same period last year(442,000) and won the first place of internet phone subscribers as 36.4%. And the number of subscribers of KT, which is the first company in terms of subscribers, is 3,413,000 which is increased 0.1% compare to last year (3,415,500) and it takes second place.



Source: Korea Information Society Development Institute(2016).

<Figure 2> The changes in the number of Internet phone subscribers

So KT has been striving to defend the market by offering a variety of optional services as well as the stability and comfort of home telephones connected with emotional satisfaction, such as emergency communications, safety from electromagnetic waves, and the need for family telephones. In terms of landline phone subscribers in the end of 2015, the market is shared by KT(57.5%), LGU+(17.5%) and SK Broadband(15.5%) and the others(9.5%). KT's market share exceeded 90% by the mid-2000s, but started to decline from 2008 when Internet telephone was introduced, falling below 60% for the first time at the end of 2013. In the high-speed Internet market, due to the increase of the number of household and the demand of SOHO, the market grew continuously and in the end of 2015, the total number of high speed internet subscribers are 20,024,000, followed by KT 8,328,000(41.6%), SK Broadband 2,692,000(13.4%) and LGU+ 3,483,000(17.4%), cable broadcasting operators(SO / RO / NO), 3,177,000(15.9%) and SK Telecom resellers 2,344,000(11.7%) respectively. As high-speed internet market is full, the net additions of subscribers are gradually declining. And the net growth of subscribers of KT, SK (including SK Telecom resale) and LGU+ reached 89,700,000 in 2015 and 27,700,000 in 2016 which shows gradual declination.

The subscribers of broadcasters and special category telecommunications distribution operator grew by 2014, but turned to decrease by 68,000 subscribers in 2015. Then the number went up to 12,000,000 in the first half of 2016. In case of SK(including SK Telecom resellers), increase of the number of the subscribers seems to continue due to the resale of SK Telecom.

Attracting new customers to the high-speed Internet access market seems difficult as it's already a mature market where the competition for recapturing customers is severe. The high-speed internet market has been competing one another for speed and rate so far. As of 2015, 93.2% of all subscribers are using at least 50Mbps, and 10.6% of subscribers are using giga internet which is over 100Mbps. In low-speed services market below 50Mbps, cable broadcasters account for 35.5%, KT 33.3%, SK broadband 29.1%, and LGU+ 2.1%. In the service market which is between 50Mbps and 100Mbps, KT accounts for 41.5%, SK Broadband 26.9%, LGU+ 10.9%, cable broadcasters 12.0%. In the service market which is over 100Mbps, KT has 48.3%'s share and cable broadcasters, 31.3%, LGU+, 10.9% and SK Broadband(including SK Telecom resale). 9.6%. In the case of KT, market share tends to increase thanks to the faster transmission rate, while SK broadband (including SK Telecom resale) and LGU+ have a relatively high share of the product of 50Mbps to 100Mbps. On the other hand, in the case of cable broadcasting companies, low-speed products of less than 50Mbps and Giga Internet over 100Mbps are relatively polarized due to their relatively high share.

The rate-based rate and commodity system is maintained by full rate settlement, so the degree of differentiation between products is low. As the convergence distribution market has been activated, competition among telecommunication companies and telecom and broadcasting companies has become full-scale, and customer conversion rates are rising, so customer care and maintenance are becoming more important. KT market share by 45.5%, LGU+ 18.4%, SK Broadband 12.5%, cable broadcasting and special category telecommunications operator 12.4%, and SK Telecom resale 11.2%, respectively(Korea Association for ICT Promotion, 2015).

As the high-speed Internet market has entered a mature period, service providers try to steal their competitor's customers, rather than creating new subscribers. Therefore, average monthly revenue per user(Average Revenue Per User) is steadily decreasing due to such changes in the market environment. The ARPU of the three telecom companies decreased by KRW 1,930 from KRW 21,567 in 2010 to KRW 19,637 in 2015, and by KRW 4,131 from KRW 20,516 in 2010 to KRW 16,385 in 2015. LGU+ also experienced the decrease from 22,917 won in 2012, to 20,083 won in 2015. However, it is the only company whose ARPU has surpassed KRW 20,000. SO's ARPU is about 9,000 won to 15,000 won. In the case of Dilive, it has steadily declined since 2012, falling below the KRW 10,000 by KRW 9,217 in 2015. T-broad is the only company which experienced the increase of ARPU marking KRW 15,634 in 2015. The monthly average revenue per subscriber of telecom operators is relatively higher than that of cable operators. It is considered because the telecom operator has more subscribers using higher rate of services than cable operators. Recently, the marketing portion of

combined products and customer base services is increasing in the speed competition. Advertising is also shifting from the comparison of properties of broadband Internet to emphasizing the strength of combined service and differentiated customer value. SK Broadband has introduced image ads targeting younger customers with the launch of new brands. LGU+ is developing an emotion-oriented brand strategy that strengthens the intimacy with customers. IPTV is the service that provides information services, video contents, and broadcasts through TV using high-speed Internet. It is a boundary-area service having both broadcasting and communication characteristics. The TV portal type VOD service was provided first. In 2004, KT launched VOD service called Homen. In July 2006, Hanaro Telecom launched Hana TV, a VOD-centered TV portal service that excludes real-time broadcasting. As Hanaro dominates the market with HanaTV, KT preparing to launch full IPTV service including real-time broadcasting, released Mega TV in the form of TV portal providing VOD service in July 2007. In December 2007, LG Powercom released myLGtv. The bill for commercialization of IPTV, which has been discussed since 2004, passed by the IPTV legislation at the end of 2007. In September 2008, Korea Communications Commission announced three companies, including KT, Hanaro Telecom(now SK Broadband), and LG Powercom as service providers. With the commercialization of IPTV service, they are providing various types of living information as video on demand(VOD), such as weather and real estate. So far, they have served terrestrial re-transmission of education or entertainment programs. However, they are expected to broaden their service to remote video education, personalized content, T-Commerce and other services. Since the launch of IPTV services in 2009, cable TV subscribers have been steadily declining and IPTV subscribers are increasing. As of June 2017, the share of subscribers among platforms is 44.2% for IPTV, 45.3% for Cable TV, and 10.5% for Satellite TV. In 2016, IPTV accounted for 47.0% of revenue share, followed by Cable TV with 42.0% and Satellite TV with 11.0%, which exceeded Cable TV's sales for the first time in eight years.

2.2. Attributes of Encounter Experiences for Household Telecommunication and Distribution Services(Including the Results of MGD)

In distribution marketing, encounter is often used along with the term, Moment of Truth, and it is generally defined to include enterprises' human resources(sales people) and nonhuman resources(facilities, equipment, and so on) which customers directly contact with during interacting with the enterprises.

Moment of truth can be translated into customer contact, service contact, etc(Coo, 2018). Definitions are as follows. Specifically, Shostack(1985) defined encounter as 'the moment in which customers are directly interact with

enterprise' while Suprenant and Solomon(1987) defined it as 'the interaction between customers and service providers.' In addition, Lovelock(1991) defined it as 'all the contact points of service enterprises' environments, customers, and other customers' while Normann(1991) defined it as 'the Moment of Truth' which means perceived quality of services at the moments when customers meet enterprises' system or sales people. All the studies are based on the assumption to include multidimensionality or different processes of contact points where customers interact with enterprises, but they all mainly focus on evaluations of service quality(Parasuraman, Zeithaml, & Berry, 1988).

Meanwhile, MacMillan, and McGrath(1997) defined that contact points where customers meet enterprises include the entire process of purchase, usage, and discontinuation, and they named this as consumption chain. They pointed out that many existing enterprises focused mainly on core products. They asserted that enterprises needed to list all the processes of customers' contacts with them and analyze customer experiences of each process in order for differentiation by providing even higher customer values. Especially, this is very essential to pay close attention to since experience management of the each process is actually closely related to performances of enterprises(Meyer & Schwager, 2007; Schmitt, 2003).

Therefore, this study aims at assuring Moment of Truth activities of enterprises in telecommunication service and distribution market of Korea, provided at each step of consumption chain from product exploration to discontinuation. However, enough positive studies about categorization of Moment of Truth types and exclamation of Moment of Truth activities areas have not executed despite the importance. Therefore, this study executed mini group discussion(MGD), a qualitative approach, as a pilot survey. Qualitative methods of study approach phenomena in multi directions thus enabling researchers to discover unexpected reasons or situations(Ambert, 1994). Also, they provide the advantage of making it possible to study human behaviors in specific situations(Denzin & Lincoln, 1994). The survey participants are inhabitants in Seoul or near metropolitan areas who have experiences of using wire phone, high speed internet, or IPTV as customers. They form four groups, and each group is composed of four to six people. The specific characteristics are shown in <Table 1>.

<Table 1> General Characteristics of MGD Survey Participants

Groups	General Characteristics of Each Group
Group 1(6)	Housewives/Company employees, Age 29~35, one person households/Newly-wed couples
Group 2(4)	Housewives, Age 31~40, family households with children under age 10
Group 3(6)	Housewives, Age 39~49, family households with children from age 10~19
Group 4(5)	Housewives, Age 49~56, family households with children over age 20

First of all, before interviews with the participants, experience factors at Moment of Truth by steps were derived by making them describe Moment of Truth experiences in detail depending on the steps including information search before registration of services, registration, and usage. Interviews were conducted in a relatively free style with no detailed questionnaires but only with outlines of questions and topics. Moderators with many experiences led the debates thus drawing enough response. As a result of the debates, customers consider provision of correct product information through comparison with other products, speedy and correct problem solving, and services which make customers feel respected as if VIP as the most impressive and positive activities at Moment of Truth. Otherwise, they consider provision of incorrect information, lukewarm responses to problems, and careless management of long-term customers as negative activities at Moment of Truth. Based on these results, this study draws 41 main Moment of Truth experiences depending on the steps of brand search(8), registration(8), usage(11), continuation(10), and discontinuation(4). The details are in <Table 2>.

Characteristics of Moment of Truth experiences clarified in the <Table 2> means a series of encounter activities which enterprise can provide to customers along the process of consumption chain. Meanwhile, influence of these Moment of Truth activities can be evaluated based on whether customers already experience each characteristic enough and how important they consider each characteristic.

For instance, if customers consider a characteristic as very important even with experiencing it enough, it can be a must-be cause which must be fulfilled. On the other hand, if customers consider a characteristic as very important without experiencing it enough, it can be an excitement cause which provides excitement and surprise to them. Likewise, if customers do not consider a characteristic as important without experiencing it enough, it can be an indifferent cause. Therefore, being able to recognize customers' perceptions about each characteristic of Moment of Truth experiences can provide important instructions to the enterprises which need to seek values as competitive advantages due to aggravation of competition and standardization of technology. Especially, for household telecommunication and distribution services in Korea, a variety of services are spread all over the stages of PLC from introduction to decline, and almost all the service providers have the household telecommunication and distribution services in all the stages of PLC in common. As a result, influence of experience characteristics differs by PLC stage of services even when Moment of Truth activities are provided by same service providers. Consequently, this study set the research subjects in order to questionably diagnose how the influence of Moment of Truth experience characteristics differs for household telecommunication and distribution services in various stages of PLC.

<Table 2> Characteristics of Moment of Truth Experiences of Household Telecommunication and distribution Services in Korea

Moment of Truth	Main Moment of Truth	Moment of Truth	Main Moment of Truth
Brand Search	1. Product inquiries by visiting dealers	Usage (Cont.)	22. Complaints & handling by visiting dealers/stores
	2. Visit in customer experience spaces		23. Usage change requests by phone & usage change
	3. Recommendations by friends		24. Usage change requests through online sites & usage change
	4. Product search on online sites		25. Usage change requests by visiting dealers/stores & usage change
	5. Product inquiries by phone		26. Receiving calls or messages about product usage information
	6. Leaflets with product information		27. Receiving bills or e-mails for payment
	7. Promotional phone calls for service registration		28. Requests of after-sale services& inquiries for after-sale service details
	8. Sales promotion events		29. Reservations for after-sale services
Registration	9. Registration request by visiting dealers	Continuation/Supplementation	30. Visits of sites & handling after-sale services
	10. Registration request by phone		31. Receiving "Happy Call" after after-sale services & notification for the results
	11. Registration request through online sites		32. checking& handling of inconvenience, such as product quality, regularly
	12. Check the result of registration request acceptance		33. Proposal by customers for ideas about products & services
	13. Receiving giveaways/free gifts of registration		34. Calls/messages for anniversaries or birth days
	14. Reservation with installation engineer for installation visit		35. Events for registered users
	15. Installation & registration		36. Membership benefits for registered users
	16. Receiving 'Happy Call' after installation		37. Benefits for long-term/VIP customers
Usage	17. Inquiries & consultations for usage by phone	Discontinuation	38. Request for discontinuation
	18. Inquiries & consultations for usage through online sites		39. Notification for cancellation of discontinuation
	19. Inquiries & consultations for usage by visiting dealers/stores		40. Receiving benefits from cancellation of discontinuation
	20. Complaints & handling by phone		41. Discontinuation
	21. Complaints & handling through online sites		

Research subject 1: The Influence of Moment of Truth experience characteristics differs by stage of PLC for household telecommunication and distribution services.

2.3. Relative Influence of Levels of Service Quality

Access to the Internet and social networking has witnessed a remarkable growth in all regions of the world, service quality depends on consumers' expectations, which compared with their perceptions of the actual service delivered(Lee, 2017). Definition of service quality is customers' evaluation of a service's superiority and excellence(Zeithaml, Berry, & Parasuraman, 1988) or directions and degrees of the difference between customers' expectation and actual perception(Parasuraman et al., 1988). Generally, service quality is created through interactions between customers and service providers in the entire process of service activities including creation and delivery of the services(Bitner, 1990, 1992: Solomon, Surprenant, Czepiel, & Gutman, 1985). Parasuraman et al.(1988) suggested that customers' evaluation of service quality is decided by the gap between their expectation and perception of the actual performances thus inferring corporeality, reliability, responsiveness, certainty, and sympathy as 5 levels which can be equally applied no

matter with type of services.

Meanwhile, it can be considered that discriminatory influence of service quality may differ by stage of products in the current market. For instance, service quality of new products just launched in the market may be evaluated by immediately visible factors including the latest facilities and their visible attraction, attire and appearance of employees, manners and politeness of the employees' behaviors. On the other hand, for the products in the stage of maturity whose customers already have certain relationships with service providers, reliability and mutuality rather than visible corporeality can be expected to have important influence on customer evaluation of service quality. Therefore, this study sets the following research subject in order to examine how the relative influence of Moment of Truth service quality on customer performance differs by stage of PLC for household telecommunication and distribution services. In this study, VoIP and IPTV were selected as those at introduction and growth stages while high speed internet and wire telephone were selected as those at maturity and decline stages.

Research subject 2: The influence of levels of Moment of Truth service quality on customer Performance differs by stage of PLC for household Telecommunication and distribution services.

3. Research Methodology

3.1. Research Design

This research was executed by requesting a professional institution for due diligence on a nation-wide basis. The survey was conducted from June 1st to 8th, 2017, and its participants were residents all over the country from age 20 to 49. The participants were also the members of households (registration after 2006) for household telecommunication distribution services(wire telephone, high speed internet, and IPTV), and they were the decision makers of registration for the services. The survey was conducted as e-mail survey with structured questionnaires, and total 858 respondents excluding undependable ones were used as valid samples for analysis. As sampling frame, e-mail users of age 20 to 49 were randomly selected with in the pool of online panel sampling frame. Based on previous studies, online survey tends to make participants feel fatigue due to responding relatively more compared to interview survey executed by records of interviewers(Galesic, 2005). Therefore, all the questions and their multiple choices except related questions were presented by random rotations of the system. For sex of respondents, 67% are males while 33% are females. Their ages include 20's as 30.1%, 30's 48.8%, and 40's as 21.1%. Their professions includes self-employed as 6.2%, white collar as 52.7%, blue collar as 10.8%, gold collar as 6.3%, and students as 10.1%. For inhabitancy of the respondents, Seoul and Gyeonggi province are the major are as. Also, 3~5million KRW is the major income level of the respondents. Characteristics of the respondents are shown in <Table 3>.

3.2. Variance Measurement

This research, in order to verify total 2 research subjects, includes each measurement of variances necessary for the research subjects. First of all, research subject 1 is to study how customer experiences at Moment of Truth of purchase level differ by telecommunication service products. Multiple selects of Moment of Truth experiences stage by stage were provided, and the respondents evaluated their satisfaction for

the selected Moment of Truth experiences. Then, they determined the ranks of the experiences up to 3rd place by importance. The evaluations were executed based on Likert Scale of 5 points(1: Not at All ~ 5: Strongly Agree).

Next, in order to verify research subject 2, service quality, customer satisfaction, repurchase willingness, and Word of Mouth willingness at Moment of Truth by telecommunication services were measured. Measurement of research concept was executed by asking the degrees of agreement for the questions, and all the questions were designed to be answered based on Likert Scale of 7 points (1: Not at All ~ 7: Strongly Agree). For dimensions of service quality, total 6 dimensions including corporeality, reliability, responsiveness, certainty, sympathy, and mutuality were drawn(Parasuraman et al., 1988; Cronin & aylor, 1992). Detail questions of the survey were total 19 selected from Parasuraman et al.(1988), and they were revised using adequate words for characteristics depending on service type at the level of no huge difference from original meanings.

4. Research Results

4.1. Verification Results and Interpretation of Research Subject 1

Research subject 1 is that the influence of Moment of Truth experience domain by customers' consumption chain differs by stage of PLC for household telecommunication and distribution services. In order to verify this, SPSS program was used for frequency analysis about Moment of Truth experience domain as well as creation of the map for influence diagnosis.

4.1.1. Analysis Methods

In this research, multiple selects of Moment of Truth experiences by purchase stage were provided, and the respondents evaluated their satisfaction for the selected Moment of Truth experiences. Then, they determined the ranks of the experiences up to 3rd place by importance. Most of all, scatter plot of which axes are experience rate of each

<Table 3> General Characteristics of Respondents

Classification		Frequency	Ratio(%)	Classification		Frequency	Ratio(%)
Sex	Male	575	67.0	Profession	Self-employed	53	6.2
	Female	283	33.0		White Collar	452	52.7
Age	20's	258	30.1		Blue Collar	93	10.8
	30's	419	48.8		Gold Collar	54	6.3
	40's	181	21.1		Students	87	10.1
Income Level	Less than 2 Million KRW	108	12.6		Non-response	119	13.8
	About 2 Million KRW	148	17.3	Seoul	307	35.8	
	About 3 Million KRW	224	26.1	Incheon/Gyeonggi	224	26.1	
	About 4 Million KRW	141	16.4	Busan/Ulsan/Gyeongsang/Daegu	179	20.8	
	More than 5 Million KRW	224	26.1	Daejeon/ChungCheong/Gwangju/Jeolla	128	14.9	
	Non-response	13	1.5	Gangwon/Jeju	20	2.3	
				Inhabitancy			

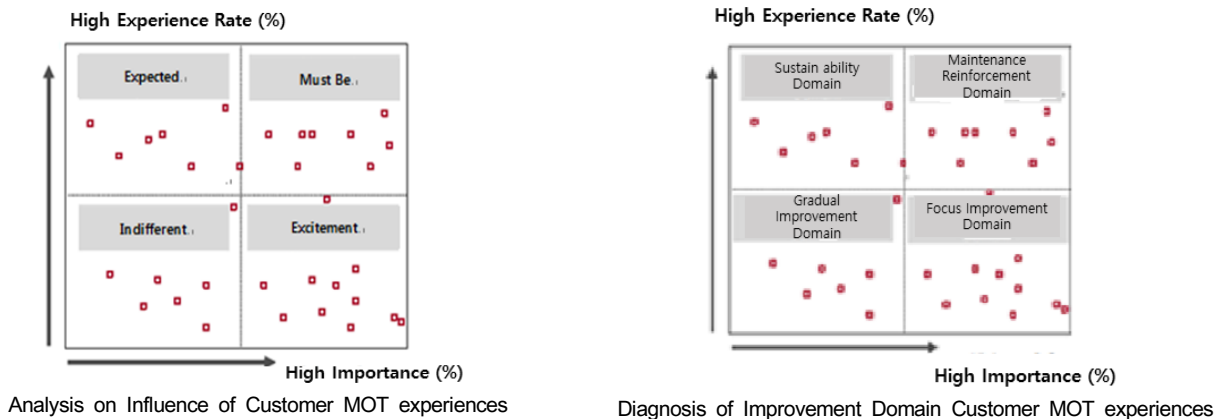
characteristic by Moment of Truth stage and importance(1st, 2nd, 3rd rank) was drawn in order to study the influence. By the axes, high experience rate with high importance constitutes Must Be factors which must be fulfilled while high experience rate with low importance comprises Expected factors accepted naturally. Low experience rate with high importance constitutes Excitement factors which provide amusement and excitement to customers while low experience rate with low importance comprises Indifferent factors. Among these factors, Must Be and Excitement factors have important meanings that they can be direct means for customer satisfaction and differentiation. Next, focus improvement domain was reviewed each characteristic's influence(each characteristic's experience rate x importance/100) and actual satisfaction level as criteria. High influence with low current satisfaction level is defined as focus improvement domain, and the definitions of other domains are suggested in <Figure 3>.

4.1.2. Verification of Research Subject

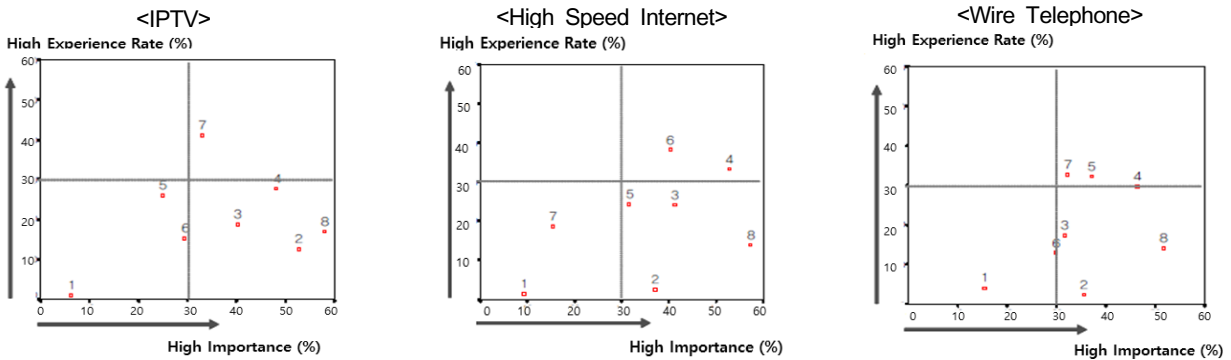
As a result of reviewing IPTV for introduction and growth stages as well as high speed internet and wire telephone

for mature and decline stages in order to evaluate influence of customer Moment of Truth experiences, characteristics are divided into common ones by the nature of household telecommunication and distribution services and different ones by different stages of PLC.

Firstly, the result of brand search, the first stage of Moment of Truth, is the following <Figure 4>. For both high speed internet and wire telephone of mature and decline stages, online sites are Must Be factors. It seems that the customers are provided information about the services through online sites easily and comfortably since the services are well-known and familiar to the customers. Also, they seem to utilize the means like leaflets and wire telephone to obtain the information about the services. On the other hand, for IPTV of introduction stage, customers have much experience receiving promotional phone calls for service registration. Since customers' awareness and intelligibility for this service are not that high, they did not experience promotion, customer experience spaces, and product search on online sites much. However, they mentioned these experiences as important.



<Figure 3> Analysis Frame of Research Subject 1

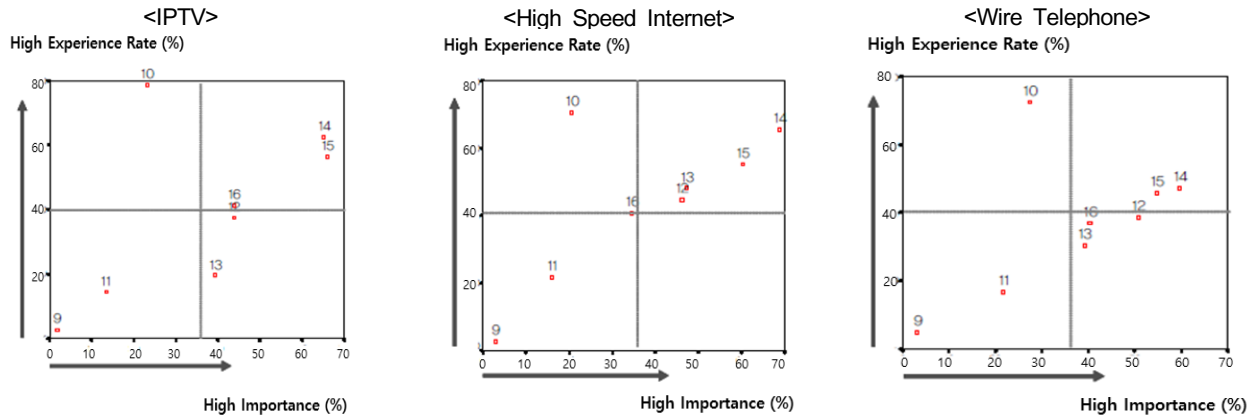


Note: 1-Product inquiries by visiting dealers, 2-Visit in customer experience spaces, 3-Recommendations by friends, 4-Product search on online sites, 5-Product inquiries by phone, 6-Leaflets with product information, 7-Promotional phone calls for service, 8-Sales promotion events.

<Figure 4> Analysis on Influence of Customer Moment of Truth Experiences by Household Telecommunication and distribution Services: Brand Research Stage

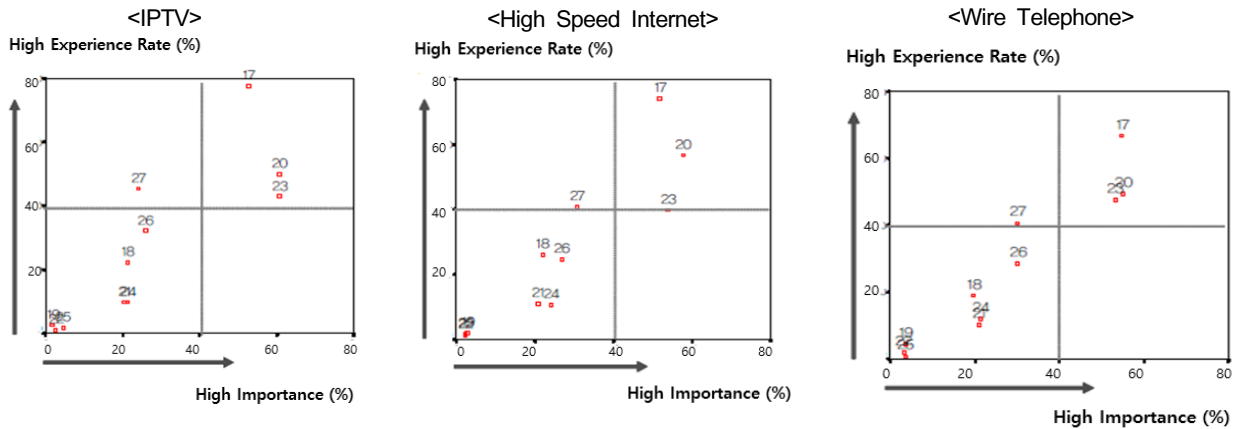
Secondly, the result of service registration is shown in <Figure 5>. While general trends are relatively similar compared to those of other stages, installation process (installation reservation and execution) is considered as an essential Must Be factor in common for all the household telecommunication and distribution services. Peculiarly for high speed internet, give away is considered as a Must Be factor at registration stage. This seems as the result of the market situation where frequent provision of giveaways due to severe competitions among business operators for service registration inducement.

The result of service usage is shown in <Figure 6>. For the stage of service usage, complaints and handling as well as usage change by phone are considered as Must Be factors by customers. Especially for high speed internet and IPTV, the characteristic of inquiries by phone appears to be a Must Be factor at a relatively high level. This is interpreted as because customers are not familiar with IPTV service itself while usage of high speed internet is complexly engaged with PC and soft wear, and so on.



Note: 9-Registration request by visiting dealers, 10-Registration request by phone, 11-Registration request through online sites, 12-Check the result of registration request acceptance, 13-Receiving giveaways/free gifts of registration, 14-Reservation with installation engineer for installation visit, 15-Installation & registration, 16-Receiving 'Happy Call' after installation.

<Figure 5> Analysis on Influence of Customer Moment of Truth Experiences by Household Telecommunication and distribution Services: Registration Stage



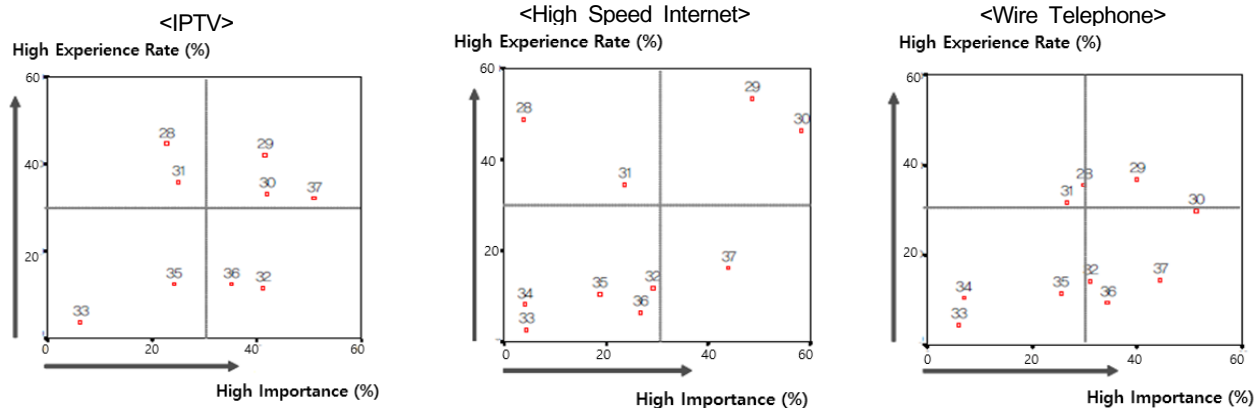
Note: 17-Inquiries & consultations for usage by phone, 18-Inquiries & consultations for usage through online sites, 19-Inquiries & consultations for usage by visiting dealers/stores, 20-Complaints & handling by phone, 21-Complaints & handling through online sites, 22-Complaints & handling by visiting dealers/stores, 23-Usage change requests by phone & usage change, 24-Usage change requests through online sites & usage change, 25-Usage change requests by visiting dealers/stores & usage change, 26-Receiving calls or messages about product usage information, 27-Receiving bills or e-mails for payment.

<Figure 6> Analysis on Influence of Customer Moment of Truth Experiences by Household Telecommunication and distribution Services: Usage Stage

Lastly, the result of continuation and management stage is shown in <Figure 7>. For all the services based on registration, the process of after-sales services(reservation and execution of A/S visit) is recognized as a Must Be factor with high experience rate and high importance. Merely for IPTV of introduction and growth stages, expectation for proactive post sales service which regularly checks service quality and inconvenience is found to be high. This result is meaningful because it is same as the research result of Challagalla, Venkatesh and Kohli(2009) which suggested that proactive post sales service preventing problems in advance is the most effective at the stage between introduction and growth rather than at decline stage or the stage right after introduction. On the other hand, for the services at maturity stage already, benefits for long-term or VIP customers as well as membership benefits are considered as important.

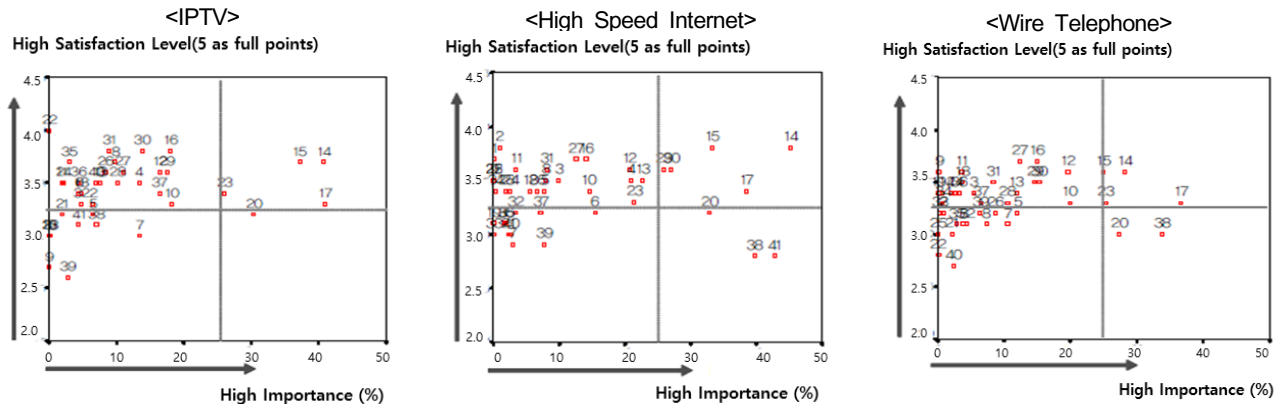
Next, in order to find focus improvement domain related to customer Moment of Truth experience, comparison between satisfaction level and influence by Moment of Truth experience was executed thus drawing the factors of which satisfaction levels are lower than influence as focus improvement domain <Figure 8>. Most of all, for IPTV, installation reservation at registration stage as well as inquiries for usage and telephone VOC at usage stage were found to be in focus improvement domain. In other words, it is needed to improve prompt ability to handle customers' requests for service registration and installation as well as handling and responding to customers' complaints and inquiries about service usage. Next, for high speed internet,

focus improvement domain factors of which satisfaction level is lower than importance include installation reservation, installation, receiving giveaways registration stage, reservation and execution of after-sales services at continuation stage, and discontinuation request and discontinuation at discontinuation stage. Consequently, it is needed to improve both the process of installation and that of after-sales services. Peculiarly, receiving giveaways was found to be the factor of improvement, and this is because of service providers' failure to keep the promise of providing excessive giveaways in the course of sever competitions for service registration inducement depending on distribution channel. For wire telephone, factors at usage stage or discontinuation stage including inquiries for usage, usage change, telephone VOC, and so on were found to be in focus improvement domain. It is needed to improve factors of inquiries for product usage and usage change due the characteristics of wire telephone which provides various payment products and additional services. For high speed internet and wire telephone at maturity-decline stage, Moment of Truth experience factors at discontinuation stage were also discovered to be in focus improvement domain. It is needed to improve them since service discontinuation is emphasized as an important Moment of Truth experience while customers' complaints are a lot in the course of discontinuation request acceptance and execution. These are because of active change of service providers for high speed internet and replacement by mobile phone and VoIP for wire telephone.



Note: 28-Requests of after-sale services & inquiries for after-sale service details, 29-Reservations for after-sale services, 30-Visits of sites & handling after-sale services, 31-Receiving "Happy Call" after after-sale services & notification for the results, 32-checking & handling of inconvenience, such as product quality, regularly, 33-Proposal by customers for ideas about products & services, 34-Calls/messages for anniversaries or birth days, 35- Events for registered users, 36-Membership benefits for registered users, 37-Benefits for long-term/VIP customers

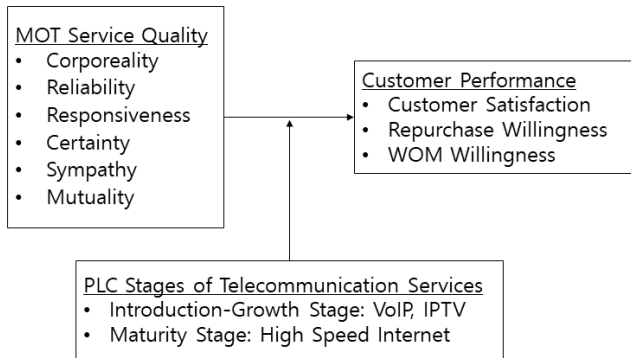
<Figure 7> Analysis on Influence of Customer Moment of Truth Experiences by Household Telecommunication and distribution Services: Continuation and Management Stage



<Figure 8> Diagnosis of Improvement Domain for Customer Moment of Truth Experiences by Household Telecommunication and distribution Services

4.2. Verification Results and Interpretation of Research Subject 2

Research subject 2 is that influence of Moment of Truth service quality on customers' behaviors(customer satisfaction, repurchase willingness, and Word of Mouth willingness) after purchase differs by stage of PLC for telecommunication and distribution services. In order to verify this, SPSS program was used for execution of analysis on reliability and validity of each dimension's service quality and customer performance. Regression analysis was also executed in order to review differential influences.



<Figure 9> Analysis Frame of Research Subject 2

4.2.1. Analysis on Reliability and Validity

In order to analyze reliability and validity of measurement factors suggested by research subject 2, investigative factor analysis and Cronbach's alpha were verified. As investigative factor analysis, concept validity was verified by using varimax through main factor analysis(Lee, Jang, & Kim, 2012; Lee, Kwag, & Potluri, 2015). The results are shown in <Table 4>.

Next, confirmatory factor analysis was executed in order to remove the factors which hinder single dimensionality of

criteria. Firstly, the result of analyzing measurement model of exogenous variables includes that factor loading of all the parts exceeds 0.75. Also, t-values all are meaningful at the level where $p < 0.01$. Conformity of model is attained at the acceptable level as $\chi^2 = 993.76$ (d.f.=155), $p = 0.0$, CFI=0.95, GFI=0.89, RMR=0.036, NFI=0.94, RMSEA=0.081. For measurement model for endogenous variables, factor loading of all the parts exceeds 0.80. Also, t-values of factor loading are meaningful as $p < 0.01$. Conformity of model is attained at the acceptable level as $\chi^2 = 105.86$ (d.f.=24), $p = 0.0$, CFI=0.99, GFI=0.97, RMR=0.013, NFI=0.99, RMSEA=0.063. SMC is also more than .50 thus showing that all the parts are good measuring variables. The results are shown in <Table 5>.

Meanwhile, this research was executed according to the following process in order to analyze distinction validity of criteria. Firstly, as the most basic verification method to see distinction validity, it was checked whether correlations among constituent concepts are less than 1. Secondly, in order to verify distinction validity among constituent concepts of exogenous and endogenous variables paired comparisons between each constituent concept of the variables were executed. By this method, confirmatory factor analyses among different constituent concepts were executed twice. For the first analysis, estimation with no constraints of correlation between the two concepts was proceeded. The second analysis was executed to verify the difference between χ^2 values of two models while the correlation between the two concepts are fixed as 1. Since the difference of freedom degree is 1 between the model where correlation of two concepts is with no constraints and the other where correlation is fixed as 1, the difference between χ^2 values of the two models can be calculated. As a result of comparing and analyzing constituent concepts of 3 exogenous variables and 3 endogenous variables, this research concludes that χ^2 value of the model where correlation is fixed as 1 is bigger than that of the other model as statistically meaningful for all comparisons thus securing distinction validity.

<Table 4> Analysis on Analysis Frame of Research Subject 2

Constituent Concepts & Measurement Parts			Investigative Factor Analysis Results		Cronbach's α
			Factor Loading	Eigen Value	
Exogenous Variables Service Quality	Mutuality	Programs for enhancement of relationship with customers, such as membership, point, and so on	.778	3.903	.8574
		Continuous attention to customers' problems at registration/inducement, & usage/continuation stages	.748		
		Provision of differentiated services by customer	.729		
		Utilization of customers' suggestions for services improvement	.682		
	Reliability	Provision of perfect services at one	.773	3.050	.9241
		Provision of services at the appointed time	.738		
		To be trustworthy & reclinable	.719		
		To make customers trust & deal with	.547		
	Sympathy	Business hours of service centers are for customers' convenience	.802	2.781	.8869
		To sincerely think of customers' psychological & monetary profits	.719		
		Employees to understand what customers want	.682		
	Corporeality	Stores/facilities pleasant to look at	.818	2.352	.8715
		To have up to date devices/equipment	.698		
		Employees' tidy appearance and attire	.678		
	Certainty	Employees to be polite & courteous	.781	2.163	.8990
Employees to have enough knowledge for responding to customers' questions		.729			
Responsive-ness	To tell customers the timing of handling tasks	.704	2.007	.9049	
	Employees to provide immediate services to customers	.672			
	Employees always to help customers voluntarily	.501			
Endogenous Variables	Customer Satisfaction	Customer services satisfy my expectations.	.847	2.998	.9356
		It was a good idea to select the service provider.	.722		
		It is a reasonable service for the price paid.	.693		
	Repurchase Willingness	I will reuse the current company for the next time.	.872	2.682	.9066
		I will repurchase the service of the current company even with higher price.	.661		
		I will reuse the current company in the near future.	.572		
	WOM Willingness	I talk about the current company positively.	.863	2.323	.9432
		I recommend the current company to people around.	.746		
		I provide the information about the current company to people.	.743		

<Table 5> Analysis on Analysis Frame of Research Subject 2

Classification	Variable	$\lambda(t\text{-value})$		SMC
		The highest value	The lowest value	
Exogenous Variables (Service Quality)	Corporeality	.86(30.28)	.80(26.98)	.66
	Reliability	.92(34.67)	.80(27.91)	.81
	Responsiveness	.86(30.97)	.84(30.15)	.72
	Certainty	.89(31.86)	.87(31.10)	.77
	Sympathy	.91(33.89)	.79(27.08)	.76
	Mutuality	.85(30.31)	.75(25.05)	.68
Endogenous Variables	Customer Satisfaction	.94(36.34)	.86(31.30)	.82
	Repurchase Willingness	.94(35.98)	.80(27.85)	.78
	WOM Willingness	.97(38.69)	.84(30.21)	.86

4.2.2. Verification of Research Subjects

Research subject 2 is that influence of Moment of Truth service quality on customers' behaviors after purchase differs by stage of PLC for telecommunication services. For this, IPTV and internet phone(VoIP) were selected as household telecommunication and distribution services at introduction-growth stages while high speed internet and wire telephone were chosen as those at maturity-decline stages.

As the result of analysis, for VoIP and IPTV at introduction-growth stages, corporeality and certainty among dimensions of Moment of Truth service quality are found to have much influence on customer satisfaction, repurchase willingness, and Word of Mouth willingness. Specifically for internet phone, positive influences are exerted on customer satisfaction($\beta=.40$, $t=2.29$) and Word of Mouth willingness($\beta=.58$, $t=2.91$) by corporeality, as well as customer satisfaction($\beta=.42$, $t=2.94$) and repurchase willingness($\beta=.33$, $t=2.10$) by certainty. In addition, for IPTV, meaningful influences are exerted on Word of Mouth willingness($\beta=.21$, $t=2.18$) by corporeality, repurchase willingness($\beta=.22$, $t=1.70$) by responsiveness, customer satisfaction($\beta=.24$, $t=2.45$) and Word of Mouth willingness($\beta=.28$, $t=2.87$) by certainty, customer satisfaction($\beta=.42$, $t=3.79$) and repurchase willingness($\beta=.44$, $t=3.71$) by mutuality. The results are shown in <Table 6>.

Meanwhile, for high speed internet and wire telephone at maturity-decline stages, reliability, sympathy, responsiveness,

and mutuality among dimensions of Moment of Truth service quality are found to have meaningful influence on customer satisfaction, repurchase willingness, and Word of Mouth willingness. Specifically for high speed internet, meaningful influences are exerted on customer satisfaction($\beta=.25$, $t=3.59$), repurchase willingness($\beta=.23$, $t=3.34$), Word of Mouth willingness($\beta=.34$, $t=4.78$) by reliability, customer satisfaction($\beta=.17$, $t=2.52$), repurchase willingness($\beta=.17$, $t=2.56$), Word of Mouth willingness($\beta=.18$, $t=2.65$) by responsiveness, customer satisfaction($\beta=.16$, $t=3.06$) and repurchase willingness($\beta=.11$, $t=2.01$) by sympathy, customer satisfaction($\beta=.29$, $t=5.46$), repurchase willingness($\beta=.35$, $t=6.69$), Word of Mouth willingness($\beta=.24$, $t=4.45$) by mutuality. For wire telephone, positive influences are all exerted on customer satisfaction($\beta=.23$, $t=2.86$), repurchase willingness($\beta=.25$, $t=2.77$), Word of Mouth willingness($\beta=.27$, $t=2.84$) by reliability, customer satisfaction($\beta=.17$, $t=2.57$) and repurchase willingness($\beta=.23$, $t=3.09$) by sympathy, customer satisfaction($\beta=.35$, $t=5.16$), repurchase willingness($\beta=.41$, $t=5.40$), WOM willingness($\beta=.25$, $t=3.15$) by mutuality. The results are shown in <Table 7>.

In conclusion, for internet phone and IPTV, the services at introduction-growth stages, as well as high speed internet and wire telephone, those at maturity-decline stages, the influence on customer performance by dimensions of Moment of Truth service quality is summarized in <Table 8>.

<Table 6> Regression Analysis Results of Research Subjects: Services at Introduction-Growth Stages

Independent Variable	Dependent Variable: Standardized Coefficients (t-value)		
	Internet Phone		
	Customer Satisfaction	Repurchase Willingness	WOM Willingness
Corporeality	.40(2.29)**	.08(.51)	.58(2.91)***
Reliability	.17(0.63)	.19(1.05)	.37(1.21)
Responsiveness,	.05(0.27)	.08(0.41)	.30(1.27)
Certainty	.42(2.94)***	.08(0.62)	-.20(-1.24)
Sympathy	.20(1.11)	.33(2.10)*	-.05(-0.26)
Mutuality	-.13(-0.81)	.02(0.16)	-.20(-1.08)
R ²	.818	.849	.757
F Value	11.984(0.0)	14.975(0.0)	8.312(0.0)
(P Value)			
Independent Variable	Dependent Variable: Standardized Coefficients (t-value)		
	IPTV		
	Customer Satisfaction	Repurchase Willingness	WOM Willingness
Corporeality	.09(0.94)	.10(0.94)	.21(2.18)**
Reliability	.02(0.20)	.11(0.86)	.16(1.41)
Responsiveness,	.23(1.90)*	.22(1.70)*	.04(0.35)
Certainty	.24(2.45)**	.14(1.33)	.28(2.87)***
Sympathy	-.10(-0.87)	-.17(-1.40)	.07(0.67)
Mutuality	.42(3.79)***	.44(3.71)***	.15(1.34)
R ²	.618	.557	.614
F Value	28.341(0.0)	22.030(0.0)	27.841(0.0)
(P Value)			

Note: a. Regression analysis coefficients are standardized ones, and the values within parentheses are t-values.

*P<.10. **P<.05. ***P<.01

<Table 7> Regression Analysis Results of Research Subjects: Services at Maturity-Decline Stages

Independent Variable	Dependent Variable: Standardized Coefficients (t-value)		
	High Speed Internet		
	Customer Satisfaction	Repurchase Willingness	WOM Willingness
Corporeality	-.06(-1.16)	.02(0.37)	-.01(-0.11)
Reliability	.25(3.59)***	.23(3.34)***	.34(4.78)***
Responsiveness,	.17(2.52)**	.17(2.56)**	.18(2.65)***
Certainty	.01(.28)	-.05(-0.91)	.06(1.05)
Sympathy	.16(3.06)***	.11(2.01)**	.01(0.24)
Mutuality	.29(5.46)***	.35(6.69)***	.24(4.45)***
R ²	.566	.568	.554
F Value (P Value)	101.860(0.0)	102.540(0.0)	96.989(0.0)

Independent Variable	Dependent Variable: Standardized Coefficients (t-value)		
	Wire Telephone		
	Customer Satisfaction	Repurchase Willingness	WOM Willingness
Corporeality	.04(0.63)	-.01(-.08)	.01(0.74)
Reliability	.23(2.86)***	.25(2.77)***	.27(2.84)***
Responsiveness,	.12(1.56)	-.01(-0.01)	.08(0.96)
Certainty	.01(0.11)	-.06(-0.81)	.09(1.27)
Sympathy	.17(2.57)**	.23(3.09)***	.10(1.34)
Mutuality	.35(5.16)***	.41(5.40)***	.25(3.15)***
R ²	.642	.558	.528
F Value (P Value)	72.178(0.0)	50.699(0.0)	44.868(0.0)

Note: a. Regression analysis coefficients are standardized ones, and the values within parentheses are t-values.
*P<.10. **P<.05. ***P<.01

<Table 8> Summary of Results for Research Subjects

Independent Variable	Services at Introduction-Growth Stages					
	Internet Phone			IPTV		
	Satisfaction	Re-purchase	WOM	Satisfaction	Re-purchase	WOM
Corporeality	**		***			**
Reliability						
Responsiveness				*	*	
Certainty	***			**		***
Sympathy		*				
Mutuality				***	***	

Independent Variable	Services at Maturity-Decline Stages					
	High Speed Internet			Wire Telephone		
	Satisfaction	Re-purchase	WOM	Satisfaction	Re-purchase	WOM
Corporeality						
Reliability	***	***	***	***	***	***
Responsiveness	**	**	***			
Certainty						
Sympathy	***	**		**	***	
Mutuality	***	***	***	***	***	***

Note: *P<.10. **P<.05. ***P<.01

5. Conclusions

5.1. Research Summary and Implication

This research diagnoses customer experiences at Moment

of Truth by each service for the representative household telecommunication and distribution services: wire telephone, high speed internet, IPTV and VoIP. Also, it examines the differential influence of Moment of Truth service quality on customer performance. Implications of this study based on

analysis results are the followings.

First of all, for telecommunication and distribution services as well, it is confirmed that introduction of overall customer experience management at Moment of Truth is needed as differential means beyond simple sales of services. In other words, it is suggested that diagnosing Moment of Truth services as customer experience management and identifying appealing factors and improvement points can be utilized as the means to create new values for the future.

Specifically for household telecommunication and distribution services, installation process for registration stage, usage change and complaints handling for usage stage, after-sales services process for continuations stage are found to be Must Be factors with high experience rate and high importance as well to customers. On the other hand, sales promotion events, Before services, membership benefits, and so on are found to be Excitement factors with high importance to customers although they are not essential. For characteristics by PLC of telecommunication services, internet and wire telephone, the services at maturity-decline stages, have similar Must Be and Excitement factors stage by stage while those of IPTV, the services at introduction-growth stage, are quite different. For brand search stage, all the household telecommunication services utilize online sites primarily. However, it is found to use more various channels, such as Word of Mouth and experience spaces, as maturity of services get lower. A kind of online word of mouth will have good influence upon consumers' purchasing decision-making. For IPTV, usage inquiries and responses are found to be important Moment of Truth factors since the service itself as an initial service is not familiar to customers. Moreover, it is needed to improve immediate handling ability of customers' requests for services registration and installation as well as responding and handling of customer complaints. Meanwhile, high speed internet, the service at maturity stage with sever competitions among service providers for service registration inducement, giveaway is a Must Be factor. Improvement is needed due to customer complaints about receiving giveaways. In addition, it is used with being linked to peripheral devices and soft wear, so usage inquiries and responses function as important Moment of Truth factors. For wire telephone beyond maturity stage, it is needed to improve product usage inquiries and usage change factors due to a variety of payment products and additional services. For high speed internet and wire telephone, the services at maturity-decline stages, Moment of Truth experiences at discontinuation stage are emphasized as important. It is needed to improve discontinuation request acceptance and handling process.

Secondly, the results of analyzing influence of customer experience and service quality include that the directions of customer services need to be established differently as marketing objectives are different depending on stages of PLC for telecommunication and distribution services.

According to the established directions of customer services, measurement and management of quality at Moment of Truth as well as customer satisfaction are also needed to be changed. Functional and one-time customer services, such as registration, installation, after-sales services, and so on, are valid for telecommunication products at introduction-growth stages. However, those at the stages after maturity stage need to aim at emotional and relation-oriented customer services which include the values of reliability and mutuality in order for service differentiation through customer services. Services at introduction-growth stages need continuous improvements for installation and after-sales services focusing on Moment of Truth of brand search like customer experience spaces in order for awareness enhancement and initial purchase stimulation. Directions of customer services must focus on the encounter level. Services at growth-decline stages need to focus on Moment of Truth at usage-continuation stages during paying attentions to discontinuation stage in order to maintain current customers and prevent their turn over. It is also needed to strengthen customer service factors related to relationship enhancement.

5.2. Limitation and Further Directions for Study

Limitations of this study are the followings. Firstly, although influences of each customer Moment of Truth experience factors are analyzed, the criteria which distinguish each area is not verified statistically. For instance, for Moment of Truth activities at the boundaries of Must Be and Excitement factors, or improvement domains, special care in interpretation of where to belong is required. Consequently, for the future studies, credibility of results must be improved through logical and statistically meaningful approaches of the criteria which distinguish each boundary. Secondly, this study limits the target as household telecommunication and services in terms of setting the research subject that Moment of Truth activities and service quality levels which customers consider as important may differ by stages of PLC. Therefore, for the future studies, it is essential to verify the research subject for products and services of more various industries products in order for generalization of the result. Thirdly, other service characteristics rather than PLC can be considered regarding differential influences of Moment of Truth activities and service quality.

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