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Research on Factors Affecting Performance Indicators of Telemarketers Based on Talk Time in the Life Insurance Market: The Case of Korea

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Abstract

The telemarketing industry is gradually expanding its area as the telecommunication industry has rapidly developed. Especially the telemarketing sector of the insurance companies has been showing the most outstanding growth. They not only increase investment to achieve good telemarketing performance, but also benchmark practice of other competitors and aim for further improvement via their own knowhow. According to the survey by American Report, expenses related to the telemarketers comprise 62% of the telemarketing cost. This indicates that effective management of telemarketers is more important than deployment of system equipment and various solutions. There are correlations between the effective management of telemarketers and the amount of their average income generated as well as their turnover due to resignation and/or moving to another company. Savings in payment to telemarketers in advance may be interpreted also as a performance indicator for insurance companies. Then, the performance indicators of insurance companies can be expressed in detail into commissions of telemarketers, cases of new sales, and amount of first premiums.

In this study, we analyzed actual data related to telemarketing performance indicators to assess such performance indicators. Multiple regression analysis was applied, based on one year records, after confirming correlations among talk time, experiences, contact time, sex, age, and education all of which are telemarketing performance indicators. It is shown that there is a meaningful correlation between commissions, first premiums and new sales cases which are the business achievement of telemarketers, and total talk time and work experiences which are determinants of performance. Talk time, experiences, contact were turned out to be significant, while personal characteristics were not. In order to improve the total talk time based on this analysis, we propose to manage performance indicators by working month and training, and to introduce improved so called "Self-Call Check" through standardizing sales script of telemarketers. We also present how to improve the performance of life insurance telemarketers by extending their talk time.

Keywords: total talk time, work experience, contact, telemarketer, performance

1. Introduction

As Insurance Supervision Regulation was revised to allow insurance solicitation via internet possible from April, 2000, non-face-to-face solicitation for insurance arose as a new growing sales channel, which is a shift from face-to-face solicitation which had been practiced for several decades since 1945. This made insurance sales by way of telemarketing brisk. Especially as lots of foreign insurance companies entered Korean market, the telemarketing industry has grown dramatically. Insurance companies began at first telemarketing via simple telephone, however, they are gradually expanding the area to TV, radio, newspaper, home shopping, etc.

Such evolutionally developed telemarketing has backgrounds such as common use of computers, progress in mailing service resulting to changes in information environment, opening of home shopping broadcast, and advanced management practices of foreign insurance companies entered into Korea causing social changes. Besides these, the enlarged marketing opportunities via time-space wide approaches provided the insurance companies with diversified (stabilized) sales channels and income structures. Considering these trends, the telemarketing industry is expected to provide them with more opportunities in the future.

The main success factors in telemarketing are firstly customer database, secondly selling capability of telemarketers, thirdly effective on-line system, and fourthly competitiveness of their products. Among these

factors, working level studies on selling capability of telemarketers has been seldom done. As the telemarketing for life insurance in Korea is growing as a novel sales channel, comprehensive studies on effect on performance of telemarketers are strongly required.

This study will show, through data analysis, a relationship between 'talk time' and 'performance' which is commonly used as selling capability of telemarketers. Variables of selling capability of telemarketers such as contacts, work experience, education, sex will be empirically analyzed by using actual data, and then, a standardized management guideline for performance improvement of Call Center management will be developed to contribute to the effective Call Center management. It will also present a theoretical basis useful for capability development of telemarketers in future.

The last 1 year data mainly for telemarketers of foreign life insurance companies was analyzed in line with the study theme and objectives in order to study success factors affecting life insurance outbound performance of telesales representatives (TSR). Particularly, variables affecting life insurance outbound performance of telemarketers were selected based on the theory for the survey, and variables used in precedent reports were converted to fit the insurance industry.

In this study, empirical analysis on talk time, experience and contact among various factors determining the performance of telemarketers will be conducted. The performance success factors for the outbound telemarketers will be shown to improve their performance through detailed proof.

This report consists of 6 chapters. Chapter 1 described objectives and structure of this report as an introduction. In chapter 2, precedent studies relevant to types of performance indicators of telemarketers and performance of telemarketers were reviewed. In chapter 3, theoretical backgrounds were studies. In chapter 4, research methodology was explored. In chapter 5, the research results are explained. And in chapter VI conclusions are made.

2. Literature Review

Telemarketing market has been growing since 2000 when internet and mobile phones expanded. Particularly, specific studies on factors to improve performances of outbound telemarketing in technological aspect are rarely done, while those in environmental or cultural aspect are plentiful to a certain extent.

Hi-geon Kim (2002) performed a study on status quo and performance of telemarketing with financial services as the central figure. He found out that, in order to increase customer loyalty to corporate, it is necessary strategy for inbound telemarketing to link customer satisfaction to loyalty to corporation and inversely it is an effective strategy related to performance for outbound telemarketing to reduce dissatisfaction while enhance customer loyalty.

Eun-yeong Ahn (2004) suggested organization, payment and script as comprehensive factors related to performance of telemarketing and explained it with a focus on factors influencing on customer satisfaction or dissatisfaction when serving customers as well as on education and training which has effect to relations of satisfaction and goodwill or satisfaction and familiarity.

Hyeon Hwang (2004) pointed out that recruiting quality telemarketers who are good in attitude and talent and training them enough to be able to handle any troubles are key factors for successful telemarketing and proposed how to hire and train telemarketers.

Seong-lim Lee (2005) analyzed empirically factors influencing education and training telemarketers in the aspects of definition, environment and sociology of population and eventually suggested effectiveness of education and training. It derived the point that knowledge acquired from education was reflected in the goal of improvement in individual behavior and job performance.

Gyeong-hi Kim (2007) indicated that there were still problems such as lacks of consumer's perception, lack of operational solutions and operational techniques although growth of telemarketing was brought about rapidly owing to increasing women entering into public affairs and diversification, segmentation and informationizing of consumer personality in her study on the activation plan of telemarketing. And it was also confirmed that in order to establish successful telemarketing three subjective bodies of economy, the government, corporation and consumer, should examine how to nurture domestic environment of telemarketing: corporations conduct marketing research and develop marketing activation strategies to strengthen each one's competitive power and proactive customer services, the government makes the most of telemarketing, i.e., employment creation and socio-economic benefit through preparation of system and recommendation of telemarketing and consumer cultivates perception of rational consumption.

Yun-jeong Song (2007) conducted hierarchical regression analysis on performance of outbound telemarketing and found from the results that the factor of job satisfaction only had a significant effect to customer orientation among sales representatives for inbound telemarketing and contrarily factors such as job, boss, education and human resources development had a significant effect to customer orientation among sales representatives for outbound one, which influences in performance of a call center.

Chul Kyung Ahn (2009) studied on the effects of insurance sellers' personal characteristics on sales performance. Chul Kyung Ahn et al. (2000) investigated on the trends of e-commerce for the insurance industry.

As seen in the above studies, researches on performance of outbound telemarketing in insurance company were extremely poor. Although necessity of study on effective factors influencing performance of a few global insurance company as well as domestic ones that made rapid advancement exists for the purpose of enhancing performance of most insurance company and upgrading the telemarketers, there is still a lack of empirical researches on the issue in the country.

3. Theoretical Backgrounds

Telemarketing is a name blended with 'telecommunication' and 'marketing', and in respect to the fact that it uses telephone as a medium it is similar to telephone selling. Telephone selling, however, is calling someone at random on the basis of directories or telephone directory and persuading him or her to buy something, while telemarketing is one of direct marketing techniques that approach users of media systematically and intentionally based on refined customer database (Note 1). Telemarketing comes from modern marketing concept which maximizes customer services and customer satisfaction, and its specific method to actualize that concept is using telecommunication and computer system of a high technology which is a new method for customer contact.

The emerging new method changes marketing techniques from mass media to personal media particularly because of diversity of customers. What is currently used is interaction direct marketing which makes use of synergy effect for maximizing customer response by means of efficient integration and operation of interrelationship between different kinds of media by nurturing characteristics of each medium to the fullest (Note 2).

In particular, because interaction direct marketing requires accurate information regarding the target market, more investment is needed from the scratch compared to establishing database for individual promotional media. The reason why is that media such as TV, radio, newspapers, magazines, printed ads are one-way communication tools, whereas IDM (interaction direct marketing) uses two-way communication method. What interaction direct marketing takes is so-called response compression method which enhances customer response to increase actual purchasing by connecting advertising through postage and print media, public relations and sales promotion to telemarketing.

Performance indicator refers to management system aiming at performance improvement of corporation and individual as well to achieve maximization of corporate performance and ultimate corporate goal. In other words, performance indicator means solid management process which requires not only evaluation of individual's performance but systematic setting corporation's management direction to proceed, corporate strategies and feed-back system of strategy implementation and its results by applying corporate vision, strategy and business plan for each level; business unit, team and individual.

Performance indicator system should help with achieving ultimate corporate goal to improve performance of corporate management and with supporting decision making in real time, and also it should be able to compile performance data and to figure out key performance indicators to save them in data base so as to facilitate analysis and use of those indicators. Improvement of management performance is connected to other systems in real time, and performance management system reinforces flexibility and confrontation ability of a corporation by reflecting the performance indicators in real time to business. Then it helps corporation with growing to be a future-oriented enterprise. And the system also acts as a measurement to provide with management capability related to three important factors in corporate management: performance, growth and risks.

When examine specific meaning of performance indicator system, it is a way of managing performances strategically and it means a system measuring how the goal is achieved. Significances that the system has are; first, it improves employees' performances. Second, it enables corporation to identify potent employees to be fostered. Third, it helps with manpower planning of human resources necessary in the future. Fourth, it can be used as a tool of motivation and communication by linking compensation to performance, and it functions as an identification and evaluation for acquisition of economic competitive edge.

Performance management system consists of three steps of planning, implementation and check or planning,

implementation and feed-back same as other ordinary systems. What the system affects to the corporation is introduced as follows. The system functions in several aspects. First, it shares corporate goal, mission and vision to develop employees. Second, it enables corporation to set performance goal by combining corporate goal to those of business units, team and individuals. Third, it appraises rate of progress in comparison to goal with regular interval as defined in the plan. Fourth, it makes the best use of compensation for achievement through identification of training process and development of individual capability. Last, it feeds effectiveness and contribution to corporate performance of three steps back to corporate plan.

For implementation of performance management indicators, standards of performance management indicators should be defined differently from each stage depending on progress degree of corporate growth. In introduction stage, financial performance is required and in growth stage performance indicators in both perspectives of customer as well as learning and growth, and then internal process perspective-oriented indicators in maturity stage.

Performance indicator refers to management system aiming at performance improvement of corporation and individual as well to achieve maximization of corporate performance and ultimate corporate goal. In other words, performance indicator means solid management process which requires not only evaluation of individual's performance but systematic setting corporation's management direction to proceed, corporate strategies and feed-back system of strategy implementation and its results by applying corporate vision, strategy and business plan for each level; business unit, team and individual.

For sales performance, performance indicators can be appraised in following areas: first premium, case of sales, average MMP (Monthly Modified Premium) per case, productivity per TSR (Tele Sales Representative) by working period and production range. In left column of the Table 1, the targets of customer contact were put in and in right indicators both of customer contact and contract rate after conversations with potential customers.

Performance indicators of outbound telemarketing for life insurance business can be appraised in following areas: first premium, case of sales, average MMP per case, productivity per TSR by working period and production range.

Table 1. Customer contact indicators and conversion rate indicator (unit: person, %)

	Customer Contacts Made			Conversion Ratio Ⅰ	
	result	target		result	target
Nov. '10	121.574	109.395	Nov. '10	2.80%	3.00%
Dec.	90.004	104.88	Dec.	3.00%	3.10%
Jan. '11	131.06	148.5	Jan. '11	2.90%	2.70%
Feb,	102.664	130.05	Feb,	2.90%	2.90%
Mar.	116.473	127.181	Mar.	3.40%	3.40%
Apr.	110.801	129.5	Apr.	2.90%	3.50%
May	97.086	114	May	3.20%	3.30%
Jun.	95.524	162	Jun.	3.20%	2.20%
Jul.	109.712	119.828	Jul.	3.00%	2.80%
Aug.	90.226	115.914	Aug.	3.20%	2.70%
Sept.	104.627	113.634	Sept.	3.00%	2.80%
Oct.	99.465	111.462	Oct.	2.90%	2.50%
Nov.	80.683	109.384	Nov.	3.20%	2.20%

Source: internal data of 'A' insurance company.

Customer contact indicator is an example of monthly indicators, which is shown for the purpose of boosting contact possibility of a team (around 20 persons). Conversation rate which is an indicator of success rate of contract signing shows ratio of number of cases that led to signing the contract after conversation with customer in percentage and it can be identified through the above table that 30 cases were succeeded out of 1,000 databases from TSR in December 2010.

4. Research Methodology

4.1 Research Model

In this research, multiple regression analyses are performed in order to investigate how the influence factors such

as individual characteristics and talk time affect the performance of the telemarketers. Considering the depth and frequency of performance, average monthly income (performance depth) and average monthly sales case (performance frequency) are chosen as the performance variables of the telemarketers.

Particularly, as for the survey items, the variables that affect the outbound telemarketing performance were extracted based on the theoretical basis, and modifying the items used in the existing papers so as to be applicable to the insurance industry.

Besides the talk time, contact, job experiences and the telemarketer's individual characteristics (sex, education, age) were taken into consideration as the explanatory variables. The analysis model used in this research is shown below.

$$Y_{case}=\beta_0+\beta_1 T_{Time}+\beta_2 Exp+\beta_3 Contact+\beta_4 D_{sex}+\beta_5 D_{edu}+\beta_6 Age+\varepsilon \quad (1)$$

$$Y_{income}=\beta_0+\beta_1 T_{Time}+\beta_2 Exp+\beta_3 Contact+\beta_4 D_{sex}+\beta_5 D_{edu}+\beta_6 Age+\varepsilon \quad (2)$$

Y_{case}, Y_{income} are dependent variables for telemarketer's performance, new sales case and monthly income, respectively, β_0 is constant term, β_0, β_1, β_2, … β_6, are coefficient vectors of which elements are the given variables. T_{Time}, Exp, $Contact$, D_{sex}, D_{edu} Age are independent variables. T_{Time}, Exp, $Contact$, Age are successive data and represent total talk time, telemarketer's work period, contact, and telemarketer's age, respectively. D_{sex}, D_{edu} are variables that represent sex and education, respectively, and are converted into Dummy Variables for the analysis and e is an error term.

Table 2. Explanatory variables that affect the performance

Variables	Definition
Talk time	Telemarketer's total talk time(ringing time excluded)
Experience	Telemarketer's experience
Contact	Telemarketer's number of contacts with the decision-makers
Sex	Male or female
Education	Telemarketer's educational level
Age	Telemarketer's age

In Table 2, experience is the measurement variable for the telemarketer's experience (skill) and contact means the number of contacts with the decision-makers for the insurance products, excluding the contacts with the third parties. And it is reviewed by sex and education. Especially, age is selected as one of the variables because age may affect the performance as the low aged are unskilled due to lack of experience and the old aged are physically less strong but have strong sense of responsibility. Talk time is the very important variable for the telemarketing because it is the total talk time that includes the talk time with the third party but excluding the ringing time.

Table 3. Hypotheses

<Hypothesis I>
Professionalism characteristics in life insurance will have positive effects on the new sales case (performance frequency) of the telemarketers.
(Hypothesis I-1) Talk Time will have positive effects on the new sales case of the telemarketers.
(Hypothesis I-2) Contact will have positive effects on the new sales case of the telemarketers.
(Hypothesis I-3) Experience will have positive effects on the new sales case of the telemarketers.
<Hypothesis II>
Personal characteristics in life insurance will have positive effects on the new sales case (performance frequency) of the telemarketers.
(Hypothesis II-1) Sex will have positive effects on the new sales case of the telemarketers.
(Hypothesis II-2) Age will have positive effects on the new sales case of the telemarketers.
(Hypothesis II-3) Education will have positive effects on the new sales case of the telemarketers.
<Hypothesis Ⅲ>
Profession characteristics in life insurance will have positive effects on monthly income (performance depth) of the telemarketers.
(Hypothesis Ⅲ-1) Talk time will have positive effects on monthly income of the telemarketers.
(Hypothesis Ⅲ-2) Contact will have positive effects on monthly income of the telemarketers.
(Hypothesis Ⅲ-3) Experience will have positive effects on monthly income of the telemarketers.

<Hypothesis IV>

Personal characteristics in life insurance will have positive effects on monthly income (performance depth) of the telemarketers.

(Hypothesis IV-1) Sex will have positive effects on monthly income of the telemarketers.

(Hypothesis IV-2) Age will have positive effects on monthly income of the telemarketers.

(Hypothesis IV-3) Education will have positive effects on monthly income of the telemarketers.

4.2 Hypothesis and Selection of Variables

We decided to set up hypotheses in the research model to see if each element has any positive influence on the outbound telemarketer's performance. Herein, it is required that the effect of each element of the life insurance on the performance of the outbound telemarketers should be verified. So hypothesis is generated as described in Table 3.

4.3 Selection of Variables

First, we utilized three materials of average monthly new sales case, average monthly premium and average monthly income as the telemarketer's performance indicators. The data is the actual monthly average of those of recent one year.

In order to accurately derive the determinants of the telemarketer's performance under the same environment (computational environment, product, payment, etc.), it is critical to select the samples for which the objective comparison is possible.

So we selected telemarketers with more than or equal to three month experience in the top 4 centers of company 'A'. Accordingly, overall performance appeared to be relatively higher than the total average. The main reason for this might be because we not only excluded the one-year experienced telemarketers from the sample but also selected the upper group of centers of company 'A'. The result of basic statistics analysis shows average monthly income range from KRW 1 million to KRW 10 million, monthly premium from KRW 100,000 to KRW 5 million, new case of sales from 1 to 175 with average of 49.2 (Note 3).

No significant difference is observed in the rough comparison between the basic performance data and the actual values of the frontline call center.

Table 4. Basic statistics of performance variables (Units; person, case, KRW)

variables	observations	average	standard deviation	min	max
case of sales	211	47.2	36.27	1	175
new premium	211	1716211	1215632	37126	6219151
income	211	4923017	3110841	1000000	15620170

Source: insurance company 'A', 2010–2011.

Premium per case was KRW 35,000 for guaranty insurance, KRW 150,000 for savings insurance, average monthly income was KRW 4.9 million for the telemarketers whose monthly average of first premium was KRW 1.7 million, which means that the resulting values are acceptable on the whole.

In fact, it is desired that various factors to be considered comprehensively in accessing the telemarketer's performance. As for the insurance company, new premium or new sales case can be more important. However, premium has some limitations as a performance indicator because the benefit structure is different depending on the product, and especially on the big difference of commission. From the standpoint of the telemarketers, the most important criterion that affect the performance would be the income they can get from insurance sales.

Telemarketer's income level is the final outcome which is comprehensively related to the method of commission payment, commission strategy, competitiveness against other companies, premium, new sales cases, persistency rate, etc. And the income level and new case are the general standards for determining high and low efficiency in the insurance telemarketing field. Accordingly telemarketer's income and average monthly new case will be used as the reference variables for high performance measurement in this analysis.

Regarding the data about independent variables that affect the telemarketer's performance, the actual data on 211 telemarketers who had worked under the same environment in the insurance company 'A' was used with excluding those under three month experience.

As for the independent variables for the telemarketers, the data was separately extracted according to the

outcome variables (such as the total talk-time, contact with the decision-makers) and the characteristics variables (sex, age, education).

In Table 5, 61 hours is the average monthly talk time of the total observations for 211 person, and the talk time is only for the talk that is connected to the customers excluding the ringing time (including 3rd party talk).

Table 5. Basic statistics of independent variables (units: hours, years, times)

variables	observations	average	standard deviation	min	max
talk time(t_time)	211	61.22162	21.33614	3.5	104
experience(exp)	211	36.10372	23.30629	3	143
contact	211	1417.213	817.2214	59	4712

Source: insurance company 'A', 2010–2011.

Contact means the number of talks with the decision makers for the insurance products. Talks that include 3rd party talks are excluded from the contact.

Experience is the work period counting from the month when the counselor was listed on the insurance company after passing the recruitment examination.

Correlation analysis was performed to verify the degree of satisfaction of the discriminant validity between each independent variable. Correlation analysis result is shown in Table 6. Statistical significance for most of the variables was obtained. It means that the multicolinearity is high if the correlation coefficient between the variables approaches to 1. There is no need to use this kind of variables in the analysis because they are redundant. Some variables (talk time and database) for this analysis were excluded from the research model because they showed relatively big correlation coefficients. The other variables showed relatively small correlation coefficients and were selected as the data for analysis.

Table 6. Correlation coefficients between independent variables

	talk time	experience	material(DB)	contact	sex	education	age
talk time	1						
experience	0.5912*	1					
material(DB)	0.8913*	0.5602*	1				
contact	0.5012*	0.1812*	0.5310*	1			
sex	0.1006	0.2371*	0.0892	0.0411	1		
education	0.1407*	0.1218	0.1512*	-0.0114	-0.137*	1	
age	0.0723	0.1821*	0.0402	0.1013	0.4272*	-0.0611	1

Note. ***, **, * means significant at significance level of 1%, 5%, 10%, respectively.

4.4 Features of the Sample

The subjects of this research are the outbound telemarketers of one of the foreign-affiliated life insurance companies who use similar outsourcing system under same conditions that is suitable to the purpose of this research.

Frequency analysis was performed to check the feature of the data. The distribution of sex in the data analysis shows 15.67% for male and 84.8% for female. Considering the male's share of about 30% in ordinary face-to-face channel, the portion of the male telemarketers is a little bit low.

As for age distribution, age bracket of 35–45 is the highest with 109 persons (51.7%). As for experience, number of workers is 35 (16.6%) for under or equal to 12 months, 99 (46.9%) for under or equal to 36 months, 48 (22.8%) for under or equal to 60 months, 22 (10.4%) for under or equal to 84 months, and 7 (3.3%) for under or equal to 120 months, resulting in 83.4% for over 1 year.

The distribution of the income level is relatively stabilized to show 34 persons (16.1%) for under 2 million won, 79 persons (37.4%) for under 4 million won, 45 person (21.3%) for under 6 million won, and 31 person (14.7%) for over or equal to 8 million won.

For talk time, the highest portion is 151 persons (71.6%) for monthly average of 51-80 hours, and the lowest is 15 persons (7.1%) for 81–100. For the contacts, 1,000-2,000 calls occupy over 90%, and there are 28 persons (13.3%) who recorded even over 2,000 calls. For new sales case MMP, the portions are 59 persons (20.0%) for under KRW 1 million, 83 persons (39.3%) for under KRW 2 million, 40 persons (20.9) for under KRW 3 million won, and 15 persons (7.1%) for under KRW 4 million, which shows that the telemarketers who are collecting under KRW1-2 million of MMP occupies the great portion on the whole. In the above research, we excluded telemarketers under three month of experience because there can be some interpretational errors in the performance variables.

Table 7. Features of the sample (Units: person, %)

classification		observations	portion(%)
sex	male	32	15.2
	female	179	84.8
age	1~34 years	37	17.5
	35~45 years	109	51.7
	46~ years	65	30.8
experience	1~12 months	35	16.6
	13~36 months	99	46.9
	37~60 months	48	22.8
	61~84 months	22	10.4
	85~120 months	7	3.3
education	middle school graduate	0	0
	high school graduate	137	64.9
	college graduate	41	19.4
	university graduate	33	15.6
income(monthly payment)	1~2 million KRW	34	16.1
	2~4 KRW	79	37.4
	4~6 million KRW	45	21.3
	6~8 million KRW	22	10.4
	8 million KRW ~	31	14.7
talk time(including 3rd party talk)	1~30 hours	19	9
	31~50 hours	26	12.3
	51~80 hours	151	71.6
	81~100 hours	15	7.1
contact	1~1,000	87	41.2
	1,000~2,000	96	45.5
	2,000 or more	28	13.3
new premium(MMP)	1 million or less	59	28
	1~2 million	83	39.3
	2~3 million	44	20.9
	3~4 million	15	7.1
	4 million or more	10	4.7

5. Analysis Results

Multiple regression analyses were performed to see how all of the independent variables proposed above affect the performance (frequency performance, depth performance) of the telemarketers. In order to check the multicolinearity between the independent variables, VIF (Variance Inflation Factor) was calculated to be average 1.41, which is considered that there is no specific problem with the multicolinearity.

First, frequency performance, which is the analysis result of the effect on the sales case, is shown in Table 8. First of all, overall regression model is statistically significant at the F value of 46.09 ($p<0.001$), and the explanatory power (determinant) of the regression line shows relatively high value of 0.617 ($R2=0.617$, Adj. $R2=0.597$).

In the statistical significance verification for the independent variables, talk time and contact were statistically significant at 1 percent of significance level. Experience was statistically significant at significance level of 5

percent.

Contact was significant but the sign is negative. This can be explained as follows. For the telemarketers with low rate of sales success, the increase in contact will lead to lowering the performance. On the contrary, for the experienced telemarketers, the increase in contact leads to the increase of the probability of the rate of sales success and accordingly to the proportionate increase in performance. So it can be assumed that the contact and the performance react irregularly depending on the personnel formation.

Personal characteristics such as telemarketer's sex, education, age, etc. did not show any statistical significance with the sales case which is the frequency performance.

Table 8. Multiple regression analysis of the telemarketer's frequency performance (sales case)

independent variable	regression coefficient	t-value	p-value
talk time	1.21	13.01	0.000***
experience	0.183	3.1	0.031**
contact	-0.005	-4.01	0.000***
sex	-0.166	-0.05	0.88
education	-4.11	-2.09	0.31
age	-0.186	-0.91	0.41
F= 46.09, R^2=0.617, Adj.R^2= 0.59, *VIF 1 =1.41			

Note. ***, **, * means significant at significance level of 1%, 5%, 10%, respectively.

Table 9 represents the result of multiple regression analysis on the independent variables that affect the telemarketer's depth performance (income level).

The regression model was statistically significant at F value of 21.16 ($p<0.001$), and the determination coefficient of the regression equation was 0.42 (R2=0.42, adj. R2=0.39).

As for the statistical significance, talk time and contact show statistically significant at significance level of 1 percent. Also experience is verified to be statistically significant at significance level of 5 percent. Accordingly, it implies that increase in talk time and work period will lead to the increase in telemarketer's income.

Table 9. Multiple regression analysis of the depth performance (income level) of the telemarketers

independent variable	regression coefficient	t-value	p-value
talk time	92163.22	8.01	0.000***
experience	24211.56	2.67	0.017**
contact	-963.987	-3.81	0.000***
sex	-377621	-0.69	0.42
education	-3217503.2	-1.11	0.31
age	-.8927.312	-0.31	0.69
F= 21.16, R^2=0.42, adj.R^2= 0.39, *VIF 1 =1.41			

Note. ***, **, * means significant at significance level of 1%, 5%, 10%, respectively.

Summary of the result of hypothesis verification through multiple regression analysis is as follows; first, performance determinants such as average monthly income, new sales case of the telemarketers show very high relevance with talk time and work period (experience). In this analysis, through separate and/or comprehensive analysis, it was also turned out that talk time and work period (experience) are the variables that have the highest correlation with performance, which means that they are important factors affecting the performance of the telemarketers.

Second, among the individual variables, contact with the decision makers has relevance with the performance but with negative effect. It can be explained as the sales case that the performance would be high or low depending on the skill of the telemarketers because contact and performance have little correlation for the unskilled new telemarketers and the increase of contact would lead to the increase of sales success probability for the telemarketers who have high talk efficiency per case.

Third, the effect of personal characteristics variables such as education, sex, age on the performance of the

telemarketers were turned out to be not significant.

Table 10 shows the overall hypothesis verification result obtained by analyzing the performance determinants and its related empirical data analysis as described above.

Table 10. Hypotheses verification results

hypothesis	dependent variable	independent variable	performance
hypothesis I	frequency	talk time	adopt
(professional characteristics)	performance(sales case)	contact	adopt*
		experience	adopt
hypothesis II		age	reject
(personal characteristics)		education	reject
		sex	reject
hypothesis III	depth performance	talk time	adopt
(professional characteristics)	(income level)	contact	adopt*
		experience	adopt
hypothesis IV		age	reject
(personal characteristics)		education	reject
		sex	reject

Note. 1) Adopt or reject is determined at significance level of 5 percent.

2) Contact was adopted because it has statistical significance though it shows, contrary to the hypothesis, negative effect.

6. Conclusions

It is necessary to clearly identify which success factors determine business performance for both telemarketer and firm itself. Multiple regression analyses for each individual of 211 telemarketers of Direct Business Division of A Insurance Company were conducted by using individual performance data and seemingly relevant individual performance indicators during the latest 1 year. As a result definite performance indicators were obtained. It was found that talk time and working months (experience) are meaningful performance indicators.

Performance indicators such as monthly average income of telemarketers and number of new sales have positive correlations with talk time and experiences (working period) of telemarketers. While number of contact trials, a variable for an individual, made by a contact decider is meaningful for number of new sales and income, but the correlation is negative. This result comes from the different capability in customer creation between new comers and long experienced telemarketers. Effects on the performance of telemarketers by education, sex, and age which are variables depending on the individual characters were found not significant.

It would be suggested that performance improvement schemes for the telemarketers as following based on the research and derived conclusions therefrom.

Firstly, it appeared that talk time is the most important factor which determines performance of monthly average income and case of new sales for telemarketers. Therefore, their longer call should be strategically made so that the receiver may not hang off. Thus the most important strategy above all for telemarketers to understand is call flow. Call can be extended if it flows stepwise and repeatedly like 1) introduction 2) main point 3) playing hard to get 4) closing 5) objection 3) playing hard to get 4) closing. Quantified script is needed in order to maintain flow like above, and it is required to try a dialog following call flow planned according to the script.

Secondly, the result shows that while number of contact trials, a variable for an individual, made by a contact decider is meaningful for performance negatively. It is because that new telemarketers could not lead to success even though they contacted many potential customers due to lack of experience, while highly skilled telemarketers could lead to more success as contact increased because of their high call efficiency per sales case. New telemarketers should be guided so that they may increase call efficiency by having them try optimum calls instead of lots of calling and also they should be timely coached so that they reduce contact and increase talk time.

Thirdly, as effects on the performance of telemarketers by education, sex, and age which are variables depending on the individual characters were not significant, telemarketers having various backgrounds may be recruited.

Fourthly, analyses of performance variables of telemarketers show that talk time and work experience (working

duration) showed that they were within 1% significance level. Because the performance of any telemarketer becomes poor if she(he) fails to secure optimum talk time despite of her rich experience, managers should put priority on talk time management. Policies of insurance companies to achieve excellent business result should be established with consistent sustainability based on performance indicator management of talk time so that experienced persons may stay long for their company by giving preference to them and that new employees may be trained to grow as human resources from long term view point.

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Notes

Note 1. Insurance company provides potential customers with insurance goods and insurance value and

persuades them to subscribe on the phone.

Note 2. Yang, Yu-seok, Lee, Chul, Seong, Jin-yeong, A Study on adoption strategy of telemarketing by the Korea Telecommunications, p.72, Telecommunication Development Institute, 1992.

Note 3. The currency exchange ratio is KRW: US$ = 1: 1060 (2014.10.01).