Attachment

# **Cross-tabulation analysis of consumer questionnaires on digital advertising**

<Analysis on Awareness of Opt-Out Configuration and the Terms of Service>



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# Summary

In the following sections, we conducted a cross-tabulation of the perception of collected information and the perception of opt out configurations, and the perception of terms of service for each service and the perception of information collected or used in each service, in order to investigate in detail the perception of opt out configurations and to investigate the degree of perception of terms of service by reading terms of service based on questionnaire results <sup>1</sup> for consumers made in Interim Report Regarding Digital Advertising (Attachment 2). We also conducted Chi-square test and Residual analysis on the cross-tabulation tables to analyze the correlations between responses.

As a result of the analyses, I. even the half of search service or social media users who are aware of the information gathered or used for the purpose of advertising don't know the detail of opt out configuration, and II. Among the users of search and social media services, those who answered that they "read" the terms of service had a higher percentage of awareness and understanding of each of the following six items at the 1% level of significance: (a) the fact that information is provided, (b) collection and use of information for the purpose of displaying advertisements, (c) content of information collected, (d) sharing of information with third parties, (e) use of information linked to personal information, and (f) consent after understanding the information collected and used.

Chi-square test for a cross-tabulation, also called the independence test, is a statistical technique that examines whether the answers to the multiplied questions are associated. If Chi-square test is found to be significant, the answers to the questions on the horizontal axis and the answers to the questions on the vertical axis are interpreted as having some association, rather than being independent. On the other hand, it is not clear from Chi-square test what linkages exist. We therefore analyze the correlations between Chi-square test and Residual analysis when it is determined to be significant.

<sup>1.</sup> See the Interim Report Regarding Digital Advertising (Attachment 2).

Residual analysis is a method to examine which of the cells in the cross-tabulation tables are significantly larger (or smaller) if it is determined to be significant (correlated) in Chi-square test. Residual analysis determines whether the difference (residual) between the values of the respective cells and the actual values, assuming no correlation, is statistically significant or not.<sup>2</sup> If Residual analysis determines that the values of some cells are significantly larger (or smaller), the Chi-square test can be interpreted as a result of the cross-tabulation being significant (correlated) because the values of those cells were biased. Even when Residual analysis indicates that the values of some cells are significantly larger (or smaller), they cannot have causality.

In some cross-tabulations, the reliability of the above results may not be assured due to biases in cell values and other factors. Therefore, in analyzing the cross-tabulation tables, Chi-square test and Residual analysis were conducted by adding up similar options (by adding the number of cells to be regarded as one option).

2. Actual analyses determine whether the adjusted residuals that replace the residuals with the same level are statistically significant or not.

(Head) Q. Some social media offer configurations that do not allow collection and usage of your personal information ("opt out configurations"). Do you know about this function?

(Side) Q. Are you aware of what information is collected or used for displaying advertisements when using social media?

■ I I	know	—	ow the name, am not sur of		I don'	t know	
(	<b>)%</b>	20%		40%	60%	80%	1009
Be aware			55.0		20. 1	24. 8	
Somewhat be aware		25. 0		34. 4		40. 6	
Neither	11.3		28. 7		60.	. 1	
Somewhat not aware	11.6		26. 0		62. 5	5	
Not aware	8.4	16. 8			74. 8		
Overall	18.	3	27. 7			54. 1	

	1				In th	ne case of 30 or more persons	
	I know	I know the name, but am not sure of details	I don't know	Horizontal total		+10 points or more from Overall	
Be aware	(n) *** 82	2 * 30	*** 37	149		+5 points or more from Overall	
De aware	(%) 55.0	20.1	24.8	100.0			
Somewhat be aware	*** 145	5 ** 200	*** 236	581		-5 points or less from Overall	
Somewhat be aware	25.0	34.4	40.6	100.0		-10 points or less from Overall	
Neither	*** 62	2 158	*** 331	551		-10 points of less from Overan	
INCILIEI	11.3	3 28.7	60.1	100.0	*** Posit	ively significant at the 1% level	
Somewhat not aware	*** 57	7 128	*** 308	493	÷		
Somewhat not aware	11.0	6 26.0	62.5	100.0	<b>**</b> Posit	ively significant at the 5% level	
Not aware	*** 19	9 ** 38	*** 169	226	* Posit	ively significant at the 10% level	
	8.4	4 16.8	74.8	100.0	*** Nega	tively significant at the 1% level	
Overall	365	5 554	1081	2000			
Overall	18.3	3 27.7	54.1	100.0	** Nega	tively significant at the 5% level	

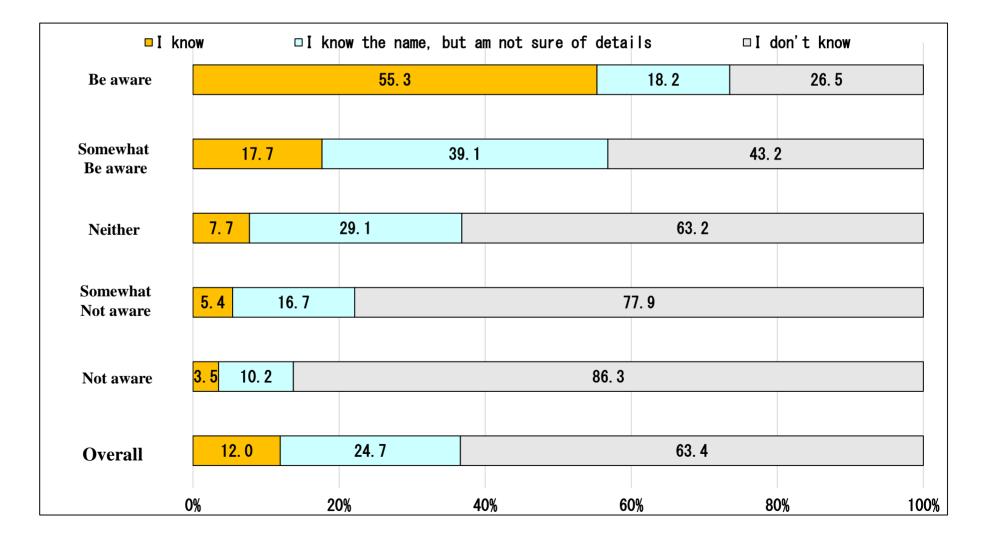
\* Negatively significant at the 10% level

(To respondents belonging to the cell

# Results

From the above cross-tabulation tables, it was found that even among social media users who responded "Be aware" of the information collected or used for the purpose of advertising display, 45% of them responded "I don't know" or "I don't know for details" on opt out configurations. In addition, Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 257.67$ , 8 degrees of freedom). A Residual analysis showed that a high proportion of respondents selected "Be aware" answered "I know" in terms of opt out configuration for social media services (1% significant level) and conversely a high proportion of respondents selected "Not aware" answered "I don't know" in terms of opt out configuration for social media services (1% significant level).

- (Head) Q. Some search services offer configurations that do not allow collection and usage of your personal information ("opt out configurations"). Do you know about this function?
- (Side) Q. Are you aware of what information is collected or used for displaying advertisements when using search services?



	I know	I know the name, but am not sure of details	I don't know	Horizontal total	(To respondents belonging to the cell In the case of 30 or more persons
De envere	*** 73	* 24	*** 35	132	+10 points or more fromOverall
Be aware	55.3	18.2	26.5	100.0	
Come lot have an	*** 83	*** 184	*** 203	470	+5 points or more from Overal
Somewhat be aware	17.7	39.1	43.2	100.0	-5 points or less from Overall
Naithan	*** 46	*** 173	376	595	
Neither	7.7	29.1	63.2	100.0	-10 points or less from Overall
Computed and owned	*** 25	*** 77	*** 359	461	
Somewhat not aware	5.4	16.7	77.9	100.0	*** Positively significant at the 1% level
Not ouron	*** 12	*** 35	*** 295	342	ቃቃ D'.' 1''ሮ'
Not aware	3.5	10.2	86.3	100.0	<ul><li>** Positively significant at the 5% level</li><li>* Positively significant at the 10% level</li></ul>
0 11	239	493	1268	2000	
Overall	12.0	24.7	63.4	100.0	*** Negatively significant at the 1% level
					** Negatively significant at the 5% level
					Negatively significant at the 10% * level

According to the above cross-tabulation tables, even among search service users who responded "Be aware" in terms of the collecting or using information for advertising, about 45% of them responded "I don't know" or "I am not sure of the details" on opt out configurations. In addition, Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 455.84$ , 8 degrees of freedom). Residual analysis revealed that a high proportion of respondents selected "Be aware" as the type of information used for advertising answered "I know" in terms of opt out configuration (1% significant level), and conversely, a high proportion of respondents selected "not aware" answered "I don't know" (1% significant level).

- (Head) Q. It is said that although search services are free, they gather user information. Are you aware of the fact that you are offering information to the said service providers when using search services?
- (Side) Q. Do you read the terms of service when using search services?

<b>□</b> Be aware	□Somewhat be aware	□Neither	<b>□</b> Somewhat	: not aware	□No	t aware 0.0
I always read it		69. 1			19. 1	7.4 4.4
I may read it according to the service, but sometimes I do not read it	4	1. 4	31.8		17. 6	5. 4 <mark>3.</mark> 8
I only read corresponding passages when something is unclear or concerns me	38.	3	27.0	1	9. 1	9.2 6.4
I never read it		<mark>45. 3</mark>	21.7	10.	4 12.3	10. 4
0verall		<mark>44.</mark> 8	27.	1	15. 3	7.0 5.8
	0% 20	0% 40	0% 60	D%	80%	100%

#### Aggregated <sup>3</sup>

		T		,l	)	1	(To respondents belonging to the cell In the case of 30 or more persons
	Be aware	Somewhat be aware	Neither	Somewhat not aware	Not aware	Horizontal total	+10 points or more from Overall
Lalwaya maadit	*** 47	13	* 5	** 0	** 3	68	
I always read it	69.1	19.1	7.4	0.0	4.4	100.0	+5 points or more from Overall
I may read it according to	99	<mark>**</mark> 76	42	** 13	** 9	239	-5 points or less from Overall
the service, but sometimes I do not read it	41.4	31.8	17.6	5.4	3.8	100.0	-10 points or less from Overall
I only read corresponding	** 54	38	27	13	9	141	<b>***</b> Positively significant at the 1% level
passages when something is unclear or concerns me	38.3	27.0	19.1	9.2	6.4	100.0	** Positively significant at the 5% level
I never read it	48	23	11	*** 13	*** 11	106	* Positively significant at the 10% level
i never read it	45.3	21.7	10.4	12.3	10.4	100.0	*** Negatively significant at the 1% level
Overall	248	150	85	39	32	554	Negatively significant at the 5%
Overall	44.8	27.1	15.3	7.0	5.8	100.0	** level Negatively significant at the 10%
<u> </u>		· · · ·					* level

#### Results

From Chi-square test, it showed these two responses have correlation (1% significant level,  $\chi^2 = 37.279$ , 9 degrees of freedom ). In addition, Residual analysis revealed that many respondents in search service who "always read it (the terms of service)" answered "Be aware" about their provision of information (1% significant level), conversely those who answered "I never read it (the terms of service)" answered "Somewhat not aware" or "not aware" about their provision of information (1% significant level).

<sup>3.</sup> When the totaled cells are significant, both cells are marked with a sign of significance. Therefore, it is unclear whether there is a factor in either of these when the aggregated cells are judged to be significant.

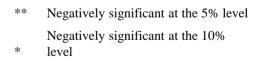
(Head) Q. The terms of service of search services contain the collection and use of a certain amount of user information for the purpose of advertisement display. Are you aware of this when using search services?

# (Side) Q. Do you read the terms of service when using search services?

□Be aware of and in use	□Be somewhat awar	e of and using	□Neither	■Somewhat not awa	re ⊐No	t aware
						1.5
I always read it		70. 6			19. 1	5.9
						2. 9
• • • • ·						3. 8
I may read it according to the service, but sometimes I do not read it	21.3		54. 8		19. 7	
						0. 4
I only read corresponding passages when something is unclear or concerns me	22. 7		39. 0	19. 1	14. 9	4. 3
Overall	29. 2		44. 4		17. 4	6.9
						2. 0
(	0% 20%	<b>4</b>	·O%	60%	80%	100%

				Г			(To res	spondents belonging to the cell		
	Be aware of and in use	Be somewhat aware of and using	Neither	Somewhat not aware	Not aware	Horizontal total	In the	e case of 30 or more persons +10 points or more from Overall		
L almong mod it	*** 48	*** 13	*** 4	r 1	2	68		+5 points or more from		
I always read it	70.6	19.1	5.9	1.5	2.9	100.0		+5 points of more from Overall		
I may read it according	*** 51	*** 131	47	7 *** 9	*** 1	239		-5 points or less from		
to the service, but sometimes I do not read it	21.3	54.8	19.7	3.8	0.4	100.0		Overall -10 points or less from		
I only read corresponding	** 32	55	27	*** 21	*** 6	141		Overall		
passages when something is unclear or concerns me		39.0	19.1	14.9	4.3	100.0		tively significant at the 1% level		
0	131	199	78	3 31	9	448		tively significant at the 5% level		
Overall	29.2	44.4	17.4	6.9	2.0	100.0		Positively significant at the 10% level		
	I.	I		нт	ł	ı	*** Nega	atively significant at the 1% level		

X Respondents who answered "I never read it (the terms of service)" on the vertical axis do not have the right to answer the questions on the horizontal axis, so the column "I never read it" has been removed from the vertical axis.



# Results

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 93.676$ , 6 degrees of freedom). A Residual analysis revealed that a high proportion of respondents in search service who selected "I always read it (the terms of service)" answered "Be aware and using" in terms of collection and use of information for advertising (1% significant level). Conversely, a high proportion of respondents who chose "I only read corresponding passages when something is unclear or concerns me" answered "Somewhat not aware" or "not aware" (1% significant level).

- (Head) Q. Are you aware of what information is collected or used for displaying advertisements when using search services?
  - (Side) Q. Do you read the terms of service when using search services?

<b>□</b> Be aware	□Somewhat b	e aware	e □Neithei	· .	⊐Somewha	t not aware		lot aware	)
I always read it			50. 0		27. 9		11.	8 7	. 4 2. 9
I may read it according to the service, but sometimes I do not read it	14. 6		46. 4			25.	9	10.	0 2.9
I only read corresponding passages when something is unclear or concerns me	12. 1		38. 3			24. 8	19	. 1	5.7
I never read it	16.0		25. 5	19	. 8	18. 9		19. 8	
Overall	18. 6		38. 1			22. 7		3. 7	6. 9
09	6	20	% 40	)%	60	)%	80%		100%

				L			(To respondents belonging to the cell
	Be aware	Somewhat be aware	Neither	Somewhat not aware	Not aware	Horizontal total	In the case of 30 or more persons +10 points or more from
	*** 34	<b>1</b> ** 19	** 8	** 5	** 2	68	Overall
I always read it	50.0	) 27.9	11.8	7.4	2.9	100.0	
I may read it according to the service, but	** 35	5 *** 111	62	*** 24	*** 7	239	Overall
sometimes I do not read it	14.6	5 <mark>46.4</mark>	25.9	10.0	2.9	100.0	
I only read	** 17	7 54	35	27	8	3 141	-10 points or less from Overall
corresponding passages when something is unclear or concerns me	12.1	38.3	24.8	19.1	5.7	100.0	*** Positively significant at the 1% level Positively significant at the 5%
I never read it	17	7 *** 27	21	*** 20	*** 21	106	** level
	16.0	) 25.5	19.8	18.9	19.8	8 100.0	* Positively significant at the 10% level
Overall	103	3 211	126	76	5 38	554	*** Negatively significant at the 1% level
Overain	18.6	5 38.1	22.7	13.7	6.9	100.0	
							Negatively significant at the 10% * level

Results

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 86.021$ , 9 degrees of freedom). Residual analysis revealed that a high proportion of respondents who selected "I always read it (the terms of service)" answered "Be aware" of what kind of information was collected (1% significant level), and conversely, a high proportion of respondents who selected "I never read it (the terms of service)" answered "Somewhat not aware" or "not aware" of what kind of information was collected (1% significant level). (Head) Q. Are you aware that the collected information and data are shared with third parties?

(Side) Q. Do you read the terms of service when using search services?

<b>□</b> Be aware	□Somewhat be awa	are □Ne	ither S	Somewhat not a	ware	□Not aware
						1.5
I always read it		54. 4		26.	5	13. 2 <mark>4. 4</mark>
I may read it according						
to the service, but sometimes I do not read	27. 2		<mark>42</mark> . 7		18.0	<b>8.4 3.8</b>
it						
I only read corresponding passages when something is unclear or concerns me	19. 1		43. 3		20. 6	10.6 6.4
I never read it	28. 3		29. 2	14. 2	15. 1	13. 2
0verall	28. 7		38. 3		17. 3	9.4 6.3
0%	20	0/	40%	60%	80%	100

r,	1	- <u>_</u>	1			11		To respondents belonging to the cell In the case of 30 or more persons
	Be aware	Somewhat be aware	Neither	Somewhat not aware	t Not aware	Horizontal total		+10 points or more from Overall
Lal-verse read it	*** 37	7 ** 18	9	) ** 1	l ** 3	68		Οντιαιί
I always read it	54.4	l 26.5	13.2	2 1.5	5 4.4	100.0		+5 points or more from Overall
I may read it	65	5 * 102	43	** 20	) ** 9	239		
according to the service, but sometimes I do not read it	27.2	2 42.7	18.0	8.4	4 3.8	100.0		-5 points or less from Overall -10 points or less from Overall
I only read	*** 27	7 61	29	) 15	5 9	141	***	Positively significant at the 1% level
corresponding passages when something is unclear or concerns me	19.1	43.3	20.6	5 10.6	5 6.4	100.0	**	Positively significant at the 5% level Positively significant at the 10% level
	30	) ** 31	15	5 *** 16	5 *** 14	106	***	Negatively significant at the 1% level
I never read it	28.3	3 29.2	14.2	2 15.1	13.2	100.0		
0 11	159	212	96	5 52	2 35	554	**	Negatively significant at the 5% level
Overall	28.7	7 38.3	17.3	9.4	4 6.3	100.0	*	Negatively significant at the 10% level

# Results

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 46.375$ , 9 degrees of freedom). A Residual analysis revealed that a high proportion of respondents who selected "I always read it (the terms of service)" in search service answered "Be aware" about the fact that their information was shared with third parties (1% significant level). Conversely, a high proportion of respondents who selected "I never read it (the terms of service)" answered "Somewhat not aware" or "not aware" about the fact that their information was shared with third parties (1% significant level).

(Head) Q. Although the collected information and data is anonymous (such as location information, search history, purchase history), are you aware that this information may be used in connection with your personal information ?

(Side) Q. Do you read the terms of service when using search services?

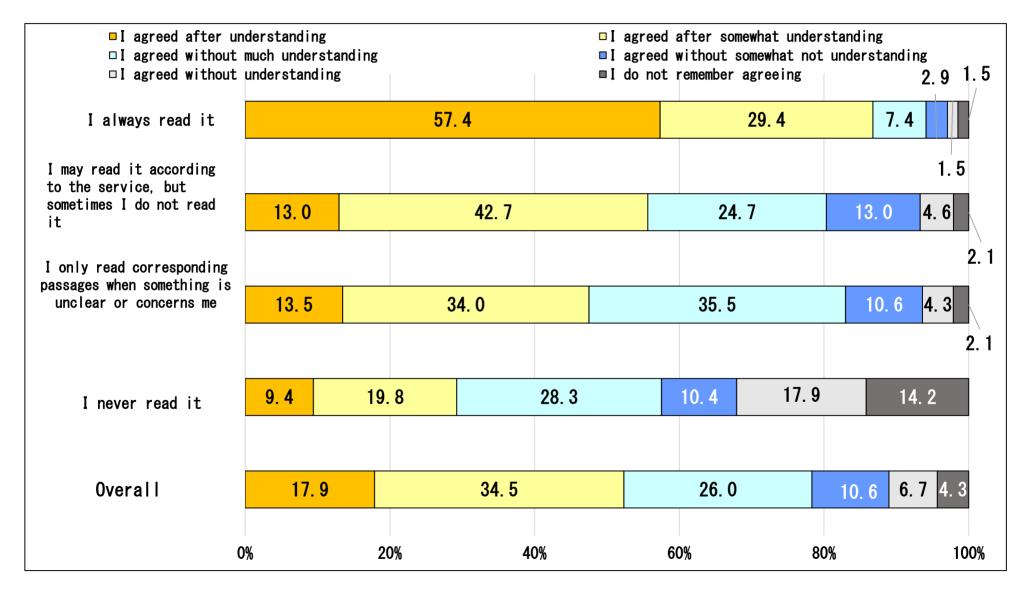
<b>□</b> Be aware	□Somewhat be aware	□Neither	<b>Somewh</b>	at not awar	e □No	ot aware
						1.5
I always read it		60. 3			25. 0	10. 3 <mark>2. 9</mark>
I may read it according to the service, but	25. 5		46.0		18.4	6.3 <mark>3.8</mark>
sometimes I do not read it						
I only read corresponding passages when something is unclear or concerns me	23. 4		<b>44</b> . 7		17. 7	9.2 5.0
I never read it	23.6	34	. 0	15. 1	15. 1	12. 3
Overall	28. 9		40. 8		16. 6	8.1 5.6
	D% 20%	40	%	60%	80%	100%

	Be aware	Somewhat be aware	Neither	Somewhat not aware	Not aware	Horizontal total			pondents belonging to the cell ase of 30 or more persons
<b>T</b> 1 1 1	*** 41	*** 17	7	** 1	** 2	68			+10 points or more from
I always read it	60.3	25.0	10.3	1.5	2.9	100.0			Overall
I may read it	61	** 110	44	** 15	** 9	239			+5 points or more from Overall
according to the service, but sometimes I do not read it	25.5	46.0	18.4	6.3	3.8	100.0			-5 points or less from Overall
I only read corresponding	33	63	25	13	7	141			-10 points or less from Overall
passages when something is unclear or concerns me	23.4	44.7	17.7	9.2	5.0	100.0	***	level Positivel	y significant at the 1% y significant at the 5% y significant at the 10%
The second it	25	36	16	*** 16	*** 13	106	*	level	
I never read it	23.6	34.0	15.1	15.1	12.3	100.0	***	level	ly significant at the 1%
T ( 1	160	226	92	45	31	554	**	Negative level	ly significant at the 5%
Total	28.9	40.8	16.6	8.1	5.6	100.0	*	Negative level	ly significant at the 10%

# Results

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 57.556$ , 9 degrees of freedom). Residual analysis showed that search service users who selected "I always read it (the terms of service)" were more likely to answer "Be aware" that this information may be linked to your personal information (1% significant level), whereas users who selected "I never read it (the terms of service)" were more likely to answer "Somewhat not aware" or "Not aware" (1% significant level).

- (Head) Q. When agreeing to terms of services for search services, are you aware of what type of information is collected or used for advertisement display?
- (Side) Q. Do you read the terms of service when using search services?



					l		· · · · · · · · · · · · · · · · · · ·	(To respondents belonging to the
	I agreed after understanding	I agreed after somewhat understanding	I agreed without much understanding	I agreed without somewhat not understanding	I agreed without understanding	I do not remember agreeing	Horizontal total	cell In the case of 30 or more persons +10 points or more from
L almong good it	*** 39	20	*** 5	** 2	** 1	** 1	68	Overall
I always read it	57.4	29.4	7.4	2.9	1.5	1.5	100.0	+5 points or more from Overall
I may read it	*** 31	*** 102	59	31	*** 11	*** 5	239	
according to the service, but sometimes I do not read it	13.0	42.7	24.7	13.0	4.6	2.1	100.0	-5 points or less from Overall -10 points or less from
I only read	19	48	*** 50	15	** 6	** 3	141	Overall
corresponding passages when something is unclear or concerns me	13.5	34.0	35.5	10.6	4.3	2.1	100.0	<ul> <li>Positively significant at the 10%</li> </ul>
T	** 10	*** 21	30	11	<b>***</b> 19	*** 15	106	level *** Negatively significant at the 1%
I never read it	9.4	19.8	28.3	10.4	17.9	14.2	100.0	level Negatively significant at the 5%
Total	99	191	144	59	37	24	554	** level Negatively significant at the 10%
Total	17.9	34.5	26.0	10.6	6.7	4.3	100.0	* level

# Results

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 152.93$  and 12 degrees of freedom). A Residual analysis showed that a high proportion of search service users who answered "I always read it (the terms of service)" selected "I agreed after understanding" in terms of what type of information is collected or used for advertising (1% significant level). Conversely, a high proportion of respondents who selected "I never read it (the terms of service)" answered "I agreed without understanding" or "I do not remember agreeing"(1% significant level).

- (Head) Q. Are you aware of the fact that you are offering information to the said service providers when using social media?
- (Side) Q. Do you read the terms of service when using social media?

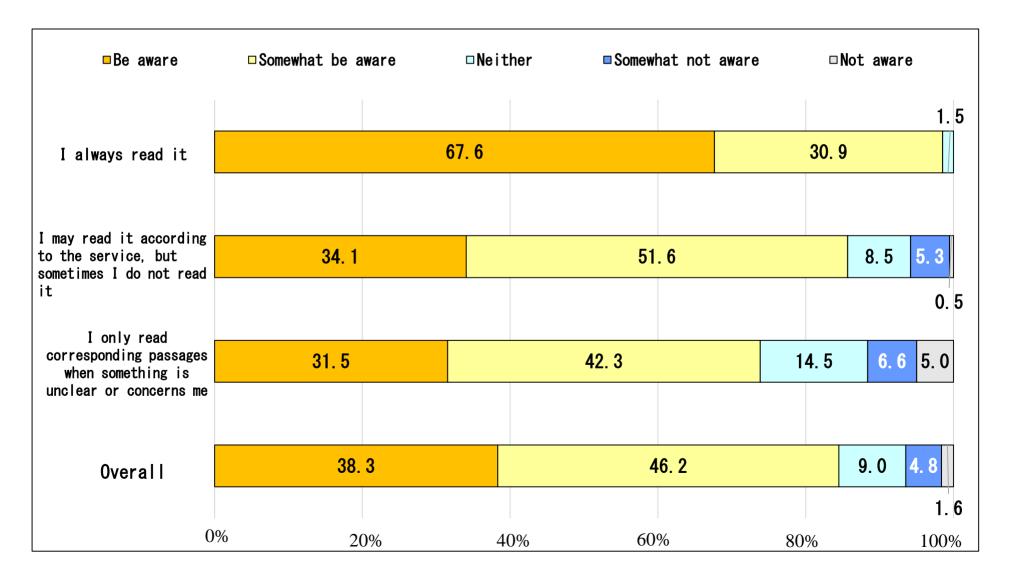
■Be aware ■Sc	mewhat be aware	□Nei	ither Some	what not awar	e ⊐No	ot aware 2.2
I always read it		53. 7		32	2. 4	10. 3
I may read it according						1.5
to the service, but sometimes I do not read it	31.9		4	<mark>6. 9</mark>	1	<b>2.9 6.7 1.6</b>
I only read corresponding passages when something is unclear or concerns me	29. 0		41. 1		15. 4	12. 4
	29.0		34. 9		19. 5	2. 1 11. 8 4. 7
I never read it	29.0		34. 9		19.0	11. 0 4. /
Overall	33. 5		42	2. 0	14.	1 8.2
						2. 2

					·		
	Be aware	Somewhat be aware	Neither	Somewhat not aware	Not aware	Horizontal total	(To respondents belonging to the cell In the case of 30 or more persons
I always read it	*** 73	** 44	14	*** 3	*** 2	136	+10 points or more from Overall
T always icad it	53.7	32.4	10.3	2.2	1.5	100.0	
I may read it	176	<b>***</b> 259	71	** 37	** 9	552	+5 points or more from Overall
according to the service, but sometimes I do not							-5 points or less from Overall
read it	31.9	46.9	12.9	6.7	1.6	100.0	-10 points or less from Overall
I only read corresponding passages when	* 70	99	37	** 30	** 5	241	*** Positively significant at the 1% level
something is unclear or							** Positively significant at the 5% level
concerns me	29.0	41.1	15.4	12.4	2.1	100.0	* Positively significant at the 10% level
I marron mand it	49	** 59	** 33	*** 20	*** 8	169	*** Negatively significant at the 1% level
I never read it	29.0	34.9	19.5	11.8	4.7	100.0	
Overel1	368	461	155	90	24	1098	** Negatively significant at the 5% level
Overall	33.5	42.0	14.1	8.2	2.2	100.0	Negatively significant at the 10% * level

# Results

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 51.786$ , 9 degrees of freedom). Residual analysis revealed that a high proportion of social media service users who selected "I always read it (the terms of service)" answered "Be aware" of their own information provision (1% significant level), while a high proportion of those who selected "I never read it (the terms of service)" answered "Somewhat not aware" or "Not aware" of their own information provision (1% significant level).

- (Head) Q. The terms of service of social media contain the collection and use of a certain amount of user information for the purpose of advertisement display. Are you aware of this when creating an account on social media?
- (Side) Q. Do you read the terms of service when using social media?



		1			)		(To respondents belonging to the cell	
	Be aware	Somewhat be aware	Neither	Somewhat not aware	Not aware	Horizontal total	In the case of 30 or more persons	
							+10 points or more from Overall	
I always read it	*** 92	*** 42	*** 2	*** 0	*** 0	136	Overall	
T always lead it	67.6	30.9	1.5	0.0	0.0	100.0	+5 points or more from Overall	
I may read it according to the	*** 188	*** 285	47	29	3	552	-5 points or less from Overall	
service, but sometimes I do not read it	34.1	51.6	8.5	5.3	0.5	100.0	-10 points or less from Overall	
I only read corresponding	** 76		*** 35		*** 12	241	*** Positively significant at the 1% level	
passages when something is unclear or concerns me	31.5		14.5		5.0	100.0	Positively significant at the 5% ** level * Positively significant at the 10% level *** Negatively significant at the 1%	
Overall	356	429	84	45	15	929	level Negatively significant at the 5%	
Overall	38.3	46.2	9.0	4.8	1.6	100.0	** level Negatively significant at the 10%	
							* level	

X Respondents who answered "I never read it (the terms of service)" on the vertical axis do not have the right to answer the questions on the horizontal axis, so the column "I never read it" has been removed from the vertical axis.

#### Results

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 83.145$ , 6 degrees of freedom). A Residual analysis showed that high proportion of social media service users who selected "I always read it (the terms of service) " selected "Be aware" when creating an account on social media (1% significant level), and on the other hand, users who selected "I only read corresponding passages when something is unclear or concerns me" answered "Somewhat not aware" or "Not aware" (1% significant level).

- (Head) Q. Are you aware of what information is collected or used for displaying advertisements when using social media?
- (Side) Q. Do you read the terms of service when using social media?

□Be aware	<b>⊐Somew</b> hat	be aware	□Neithe	; <b>r</b> (	□Somewhat	not aware	□Not awa	re
I always read it		36. 8			<u>39.</u> 7		12. 5	10. 3
								0. 7
I may read it according to the service, but	10. 9		43. 7			26. 4	15. 9	
sometimes I do not read it								3. 1
I only read corresponding passages when something is	6.6	3	31. 5		27. 8	24.	1	10. 0
unclear or concerns me								
I never read it	6.5	22. 5	18	3. 3	2	9.0	23. 7	
Overall	12. 5		37. 2		2	3. 8	19. 0	7.5
	0%	20	%	40%	60	9% 8	80%	100%

	Be aware	Somewhat be aware	Neither	Somewhat not aware	Not aware	Horizontal total	(To respondents belonging to the cell In the case of 30 or more persons
I always read it	*** 50	54	*** 17	*** 14	*** 1	136	+10 points or more from
T always lead it	36.8	39.7	12.5	10.3	0.7	100.0	Overall
I may read it according to the	60	<b>***</b> 241	<b>**</b> 146	** 88	*** 17	552	+5 points or more from Overall
service, but sometimes I do not read it	10.9	43.7	26.4	15.9	3.1	100.0	-5 points or less from Overal
I only read corresponding passages when something is	*** 16	** 76	* 67	** 58	* 24	241	-10 points or less from Overall *** Positively significant at the 1% level
unclear or concerns me	6.6	31.5	27.8	24.1	10.0	100.0	
I never read it	** 11	*** 38	* 31	*** 49	*** 40	169	<ul> <li>Positively significant at the 10% level</li> </ul>
The verread it	6.5	22.5	18.3	29.0	23.7	100.0	*** Negatively significant at the 1% level
Overall	137	409	261	209	82	1098	Negatively significant at the 5%
Overall	12.5	37.2	23.8	19.0	7.5	100.0	** level Negatively significant at the 10%
							* level

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 211.96$  and 12 degrees of freedom). Residual analysis showed that high proportion of social media service users who selected "I always read it (the terms of service)" answered "Be aware" in terms of what information is collected and used for advertising display (1% significant level), while high proportion of social media service users who selected "I never read it (the terms of service)" answered "Somewhat not aware" or "Not aware" (1% significant level).

(Head) Q. Are you aware that the collected information and data is shared with third parties?

(Side) Q. Do you read the terms of service when using social media?

□Be aware	□Somewhat be a	ware	□Neith	er	<b>Somewh</b>	at not award	9		ot aware	)	
I always read it		52. 2				33. 1			8. 1	3. 7	
I may read it according to the service, but sometimes I do not read it	22. 8			<b>4</b> 9. 5			14.	. 1	10.	7	2.9
I only read corresponding passages when something is unclear or concerns me	19. 5		32.8			21. 2		17. 0		2 9. 5	2.9
I never read it	17. 2		38. 5			16. 0	14.	2	14.	. 2	
Overall	24. 9			<b>42</b> . 1			15. 2		11.7	6. 1	
09	6	20%	4(	)%	6	D%	80	D%		1(	00%

	Be aware	Somewhat be aware	Neither	Somewhat not aware	Not aware	Horizontal total	(To respondents belonging to the cell In the case of 30 or more persons
I always read it	*** 71	** 45	s	*** 5	* 4	136	
	52.2	2 33.1	8.1	3.7	2.9	100.0	Overall
I may read it according to the	126	5 *** 273	3 78	3 59	*** 16	552	+5 points or more from Overall
service, but sometimes I do not read it	22.8	3 49.5	5 14.1	10.7	2.9	100.0	-5 points or less from Overall
I only read corresponding passages when something is	** 47	7 *** 79	*** 51	*** 41	** 23	241	-10 points or less from Overall *** Positively significant at the 1%
unclear or concerns me	19.5						level Positively significant at the 5% ** level
	** 29	65	5 27	24	*** 24	169	* Positively significant at the 10% level
I never read it	17.2	2 38.5	5 16.0	14.2	14.2	100.0	*** Negatively significant at the 1% level
Overall	273	3 462	2 167	/ 129	67	1098	
Overall	24.9	9 42.1	15.2	2 11.7	6.1	100.0	Negatively significant at the 10% * level

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 123.48$ , 12 degrees of freedom). Residual analysis revealed that high proportion of social media service users who selected "I always read it (the terms of service)" answered "Be aware" in terms of information sharing with third parties (1% significant level). Conversely, high proportion of users who selected "I never read it (the terms of service)" answered "Somewhat not aware" or "Not aware" (1% significant level).

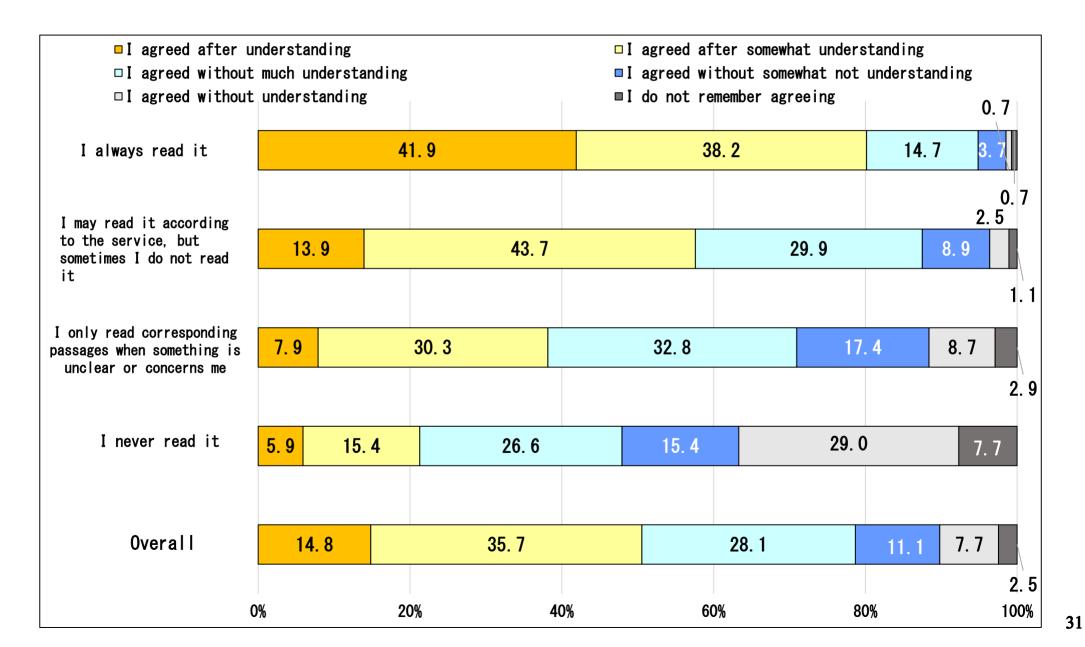
- (Head) Q. Although the collected information and data is anonymous, are you aware that this information may be linked to your personal information ?
- (Side) Q. Do you read the terms of service when using social media?

<b>□</b> Be aware	□Somewhat be aware	e □Neither	<b>□</b> Some	ewhat not awar	re ⊓N	lot aware
I always read it		54. 4		32.	. 4	6.6 5.1
						1.5
I may read it according to the service, but sometimes I do not read	24. 1		48.7		14. 9	10.1
it						2. 2
I only read corresponding passages when something is unclear or concerns me	17.8	38. 6		19. 1	12. 4	12.0
I never read it	17.8	36. 7		15. 4	16. 0	14. 2
Overall	25. 5		<b>42</b> . 6		14.8	10.9 6.1
	0% 20	0% 40	9%	60%	80%	100%

	Be aware	Somewhat be aware	Neither	Somewhat not aware	Not aware	Horizontal total	(To respondents belonging to the cell In the case of 30 or more persons
I always read it	*** 74	*** 44	*** 9	) ** 7	** 2	136	+10 points or more from
	54.4	32.4	6.6	5 5.1	1.5	100.0	Overall
I may read it according to the service, but	133	*** 269	82	2 56	ō	552	+5 points or more from Overall
sometimes I do not read it	24.1	48.7	<b>14.9</b>	) 10.1	2.2	100.0	-5 points or less from Overall
I only read corresponding							-10 points or less from Overall
passages when something is	*** 43	<u> </u>	** 46	5 30	*** 29	241	*** Positively significant at the 1% level
unclear or concerns me	17.8	3 38.6	5 19.1	12.4	12.0	100.0	Positively significant at the 5% ** level
I never read it	** 30	* 62	26	5	*** 24	169	<ul> <li>Positively significant at the 10% level</li> </ul>
	17.8	36.7	15.4	16.0	) 14.2	100.0	*** Negatively significant at the 1% level
Overall	280	) 468	3 163	3 120	) 67	1098	Negatively significant at the 5% ** level
Overall	25.5	5 42.6	5 14.8	8 10.9	6.1	100.0	Negatively significant at the 10% * level

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 133.92$ , 12 degrees of freedom). Residual analysis showed that high proportion of social media users who selected "I always read it (the terms of service)" answered "Be aware" (1% significant level). Conversely, high proportion of social media users who selected "I never read it (the terms of service)" answered "Not aware" (1% significant level).

- (Head) Q. When agreeing to terms of services for social media, are you aware of what type of information is collected and used for advertisement display?
- (Side) Q. Do you read the terms of service when using social media?



					Aggreg	gated		
					,			(To respondents belonging to the cell
	I agreed after understanding	I agreed after somewhat understanding	I agreed without much understanding	I agreed without somewhat not understanding	I agreed without understanding	I do not remember agreeing	Horizontal total	In the case of 30 or more persons +10 points or more from Overall
I always read it	*** 57	52	*** 20	*** 5	*** 1	*** 1	136	5 points or more from
Talways leau n	41.9	38.2	14.7	3.7	0.7	0.7	100.0	+5 points or more from Overall
I may read it according to the service, but	77	*** 241	165	** 49	*** 14	*** 6	552	-5 points or less from
sometimes I do not read it	13.9	43.7	29.9	8.9	2.5	1.1	100.0	-10 points or less from
I only read corresponding passages when	*** 19	** 73	* 79	*** 42	21	7	241	Overall Positively significant at the 1%
something is unclear or concerns me	7.9	30.3	32.8	17.4	8.7	2.9	100.0	<ul> <li>*** level         <ul> <li>(Large number of people)</li> <li>Positively significant at the 5%</li> <li>** level</li> </ul> </li> </ul>
I never read it	*** 10	*** 26	45	* 26	*** 49	*** 13	169	* Positively significant at the 10% level
T liever reau n	5.9	15.4	26.6	15.4	29.0	7.7	100.0	Negatively significant at the 1%
Overall	163	392	309	122	85	27	1098	*** level (the number of people is small)
Overall	14.8	35.7	28.1	11.1	7.7	2.5	100.0	Negatively significant at the 5% ** level
								Negatively significant at the 10% * level

Chi-square test showed these two responses have correlation (1% significant level,  $\chi^2 = 298.16$ , 12 degrees of freedom). Residual analysis showed that a high proportion of social media service users who selected "I always read it (the terms of service)" answered "I agreed after understanding" in terms of information which is collected or used for advertising (1% significant level). Conversely, a high proportion of social media service users who selected "I never read it (the terms of service)" answered "I agreed without understanding" or "I do not remember agreeing" (1% significant level).