Questionnaire Investigation on the Needs at Fuji City and its Sensibility Analysis Utilizing Bayesian Network

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Abstract

Shopping streets at local city in Japan became old and are generally declining. In this paper, we handle the area rebirth and/or regional revitalization of shopping street. We focus on Fuji city in Japan. Four big festivals are held at Fuji city. Many people visit these festivals including residents in that area. Therefore a questionnaire investigation to the residents and visitors is conducted during these periods in order to clarify residents and visitors' needs for the shopping street, and utilize them to the plan building of the area rebirth and/or regional revitalization of shopping street. These are analyzed by using Bayesian Network. Sensitivity analysis is also conducted. As there are so many items, we focus on "The image of the surrounding area at this shopping street" and pick up former half and make sensitivity analysis in this paper. The analysis utilizing Bayesian Network enabled us to visualize the causal relationship among items. Furthermore, sensitivity analysis brought us estimating and predicting the prospective visitors. These are utilized for constructing a much more effective and useful plan building. We have obtained fruitful results. To confirm the findings by utilizing the new consecutive visiting records would be the future works to be investigated.

Keywords: Fuji City, area rebirth, regional vitalization, festival, Bayesian network

1. Introduction

Shopping streets at local city in Japan are generally declining. It is because most of them were built in the so-called "High Growth Period (1954-1973)". Therefore they became old and area rebirth and/or regional revitalization are required everywhere.

There are many papers published concerning area rebirth or regional revitalization. Inoue (2017) has pointed out the importance of tourism promotion. Ingu et al. (2017) developed the project of shutter art to Wakkanai Chuo shopping street in Hokkaido, Japan. Ohkubo (2017) has made a questionnaire research at Jigenji shopping street in Kagoshima Prefecture, Japan and analyzed the current condition and future issues. For about tourism, many papers are presented from many aspects as follows.

Yoshida et al. designed and conducted a visitor survey on the spot, which used a questionnaire to investigate the activities of visitors to the Ueno district in Taito ward, Tokyo. Doi et al. analyzed the image of the Izu Peninsula as a tourist destination in their 2003 study "Questionnaire Survey on the Izu Peninsula." Kano conducted tourist behavior studies in Atami city in 2008, 2009, 2014 and in other years. Aburai et.al (2013a, 2013b, 2013c, 2014d) have made the bayesian network analysis on SNS.

In this paper, we handle the area rebirth and/or regional revitalization of shopping street. We focus on Fuji city in Japan. Fuji city is located in Shizuoka Prefecture. Mt. Fuji is very famous all around the world and we can see its beautiful scenery from Fuji city, which is at the foot of Mt. Fuji. There are two big shopping street in Fuji city. One is Yoshiwara shopping street and another one is Fuji shopping street. They became old and building area rebirth and regional revitalization plan have started. Following investigation was conducted by the joint research group (Fuji Chamber of Commerce & Industry, Fujisan Area Management Company, Katsuyama Maruyama Architects, Kougakuin University and Tokoha University). The main project activities are as follows.

A. Investigation on the assets which are not in active use

B. Questionnaire Investigation to Entrepreneur

C. Questionnaire Investigation to the residents and visitors

After that, area rebirth and regional revitalization plan were built.

In this paper, we handle above stated C.

Four big festivals are held at Fuji city. Two big festivals are held at Yoshiwara district(Yoshiwara shopping street) and two big festivals at Fuji district(Fuji shopping street).

At Yoshiwara district, Yoshiwara Gion Festival is carried out during June and Yoshiwara Shukuba (post-town) Festival is held during October. On the other hand, Kinoene Summer Festival is conducted during August and Kinoene Autumn Festival is performed during October at Fuji district. Many people visit these festivals including residents in that area.

Therefore questionnaire investigation of C is conducted during these periods.

Finally, we have obtained 982 sheets (Yoshiwara district: 448, Fuji district: 534).

Basic statistical analysis and Bayesian Network analysis are executed based on that.

In this paper, a questionnaire investigation is executed in order to clarify residents and visitors' needs for the shopping street, and utilize them to the plan building of the area rebirth and/or regional revitalization of shopping street. These are analyzed by using Bayesian Network. Sensitivity analysis is also conducted. As there are so many items, we focus on "The image of the surrounding area at this shopping street" and pick up former half and make sensitivity analysis in this paper. By that model, the causal relationship is sequentially chained by the characteristics of visitors, the purpose of visiting and the image of the surrounding area at this shopping street. The analysis utilizing Bayesian Network enabled us to visualize the causal relationship among items. Furthermore, sensitivity analysis brought us estimating and predicting the prospective visitors.

Some interesting and instructive results are obtained.

The rest of the paper is organized as follows. Outline of questionnaire investigation is stated in section 2. In section 3, Bayesian Network analysis is executed which is followed by the sensitivity analysis in section 4. Remarks is stated in section 5.

2. Outline and the Basic Statistical Results of the Questionnaire Research

2.1 Outline of the Questionnaire Research

A questionnaire investigation to the residents and visitors is conducted during these periods in order to clarify residents and visitors' needs for the shopping street, and utilize them to the plan building of the area rebirth and/or regional revitalization of shopping street. The outline of questionnaire research is as follows. Questionnaire sheet is attached in Appendix 1.

(1)	Scope of investigation	:	Residents and visitors who have visited four big festivals at Fuji city in Shizuoka Prefecture, Japan
(2)	Period	:	Yoshiwara Gion Festival: June 11,12/2016
			Yoshiwara Shukuba (post-town) Festival: October 9/2016
			Kinoene Summer Festival: August 6,7/2016
			Kinoene Autumn Festival: October 15,16/2016
(3)	Method	:	Local site, Dispatch sheet, Self-writing
(4)	Collection	:	Number of distribution 1400
			Number of collection 982(collection rate 70.1%)
			Valid answer 982

2.2 Basic Statistical Results

Now, we show the main summary results by single variable.

2.2.1 Characteristics of Answers

1) Sex (Q7)

Male 48.9%, Female 51.1%

These are exhibited in Figure 1.
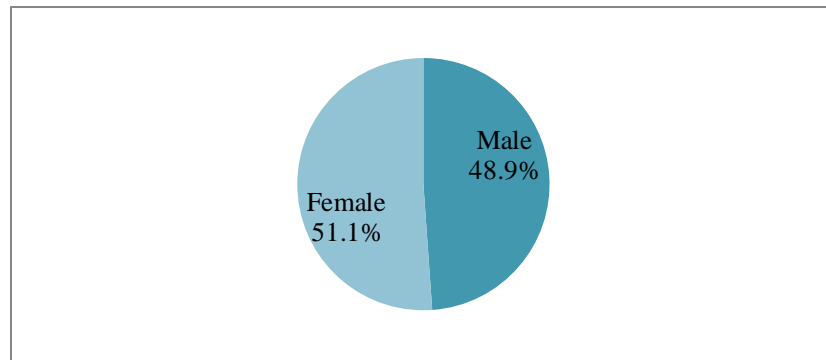
Figure 1. Sex (Q7)

2) Age (Q8)

10th 16.2%, 20th 14.8%, 30th 22.4%, 40th 17.4%, 50th 11.6%, 60th 10.5%, More than 70 7.1%

These are exhibited in Figure 2.
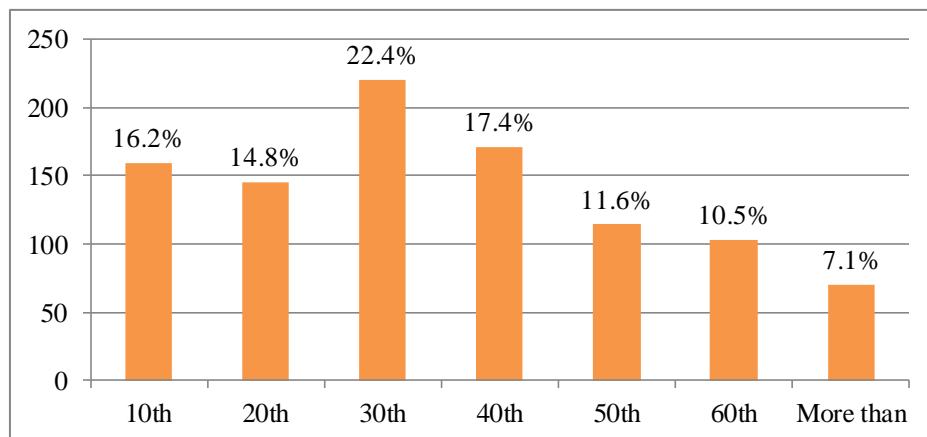
Figure 2. Age (Q8)

3) Residence (Q9)

a. Fuji city 56.4%, b. Fujinomiya city 18.0%, c. Numazu city 7.2%, d. Mishima city 2.3%, e. Shizuoka city 4.2%, F. Else (in Shizuoka Prefecture) 5.1%, g. Outside of Shizuoka Prefecture 6.9%

These are exhibited in Figure 3.
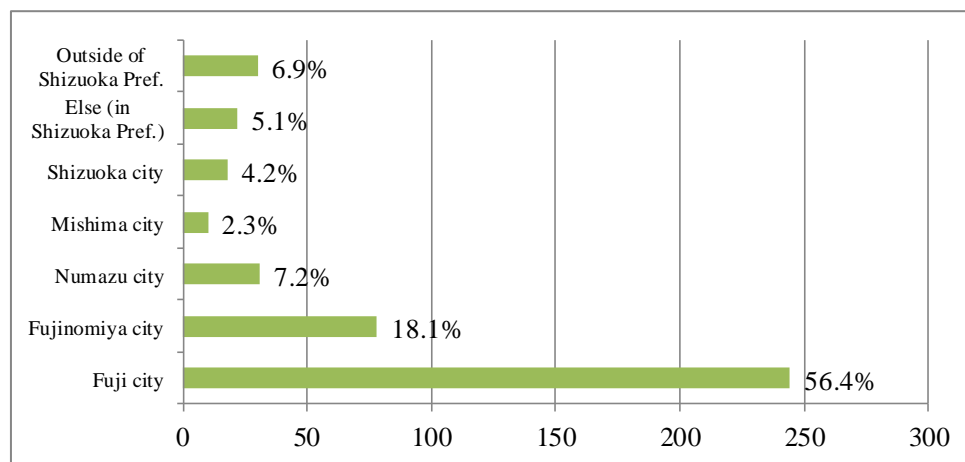
Figure 3. Residence (Q9)

4) How often do you come to this shopping street? (Q1)

Everyday 17.4%, More than 1 time a week 16.5%, More than 1 time a month 25.8%,

More than 1 time a year 31.6%, First time 4%, Not filled in 4.8%

These are exhibited in Figure 4.
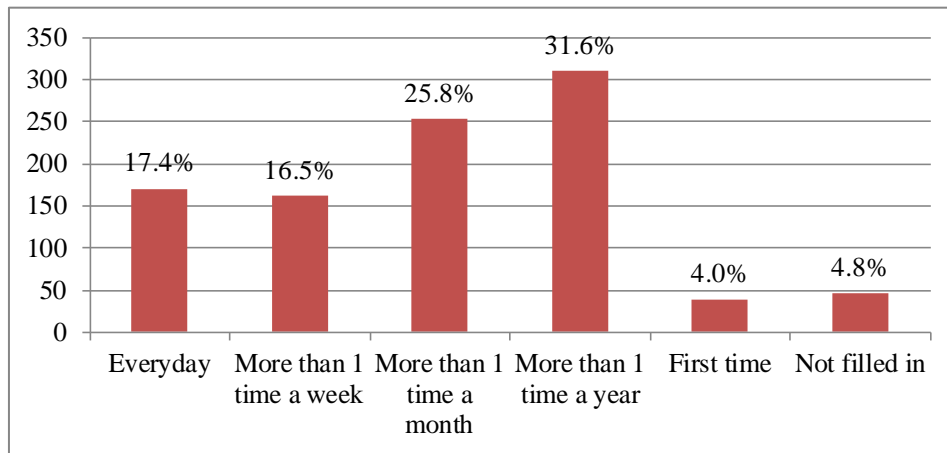
Figure 4. How often do you come to this shopping street? (Q1)

5) What is the purpose of visiting here? (Q2)

Shopping 18.8%, Eating and drinking 13.4%, Business 7.4%, Celebration, event 40.2%,

Leisure, amusement 4.0%, miscellaneous 16.1%

These are exhibited in Figure 5.
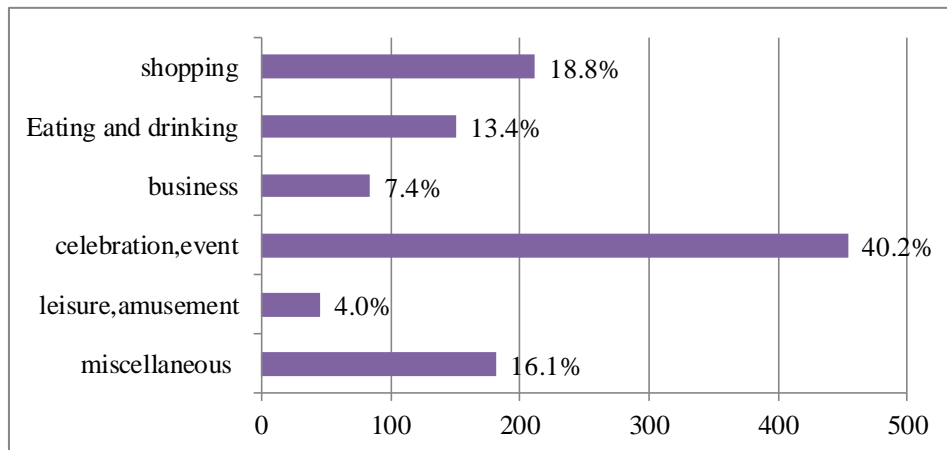
Figure 5. What is the purpose of visiting here? (Q2)

6) How do you feel about the image of the surrounding area at this shopping street? (Q3)

These are exhibited in Figure 6.
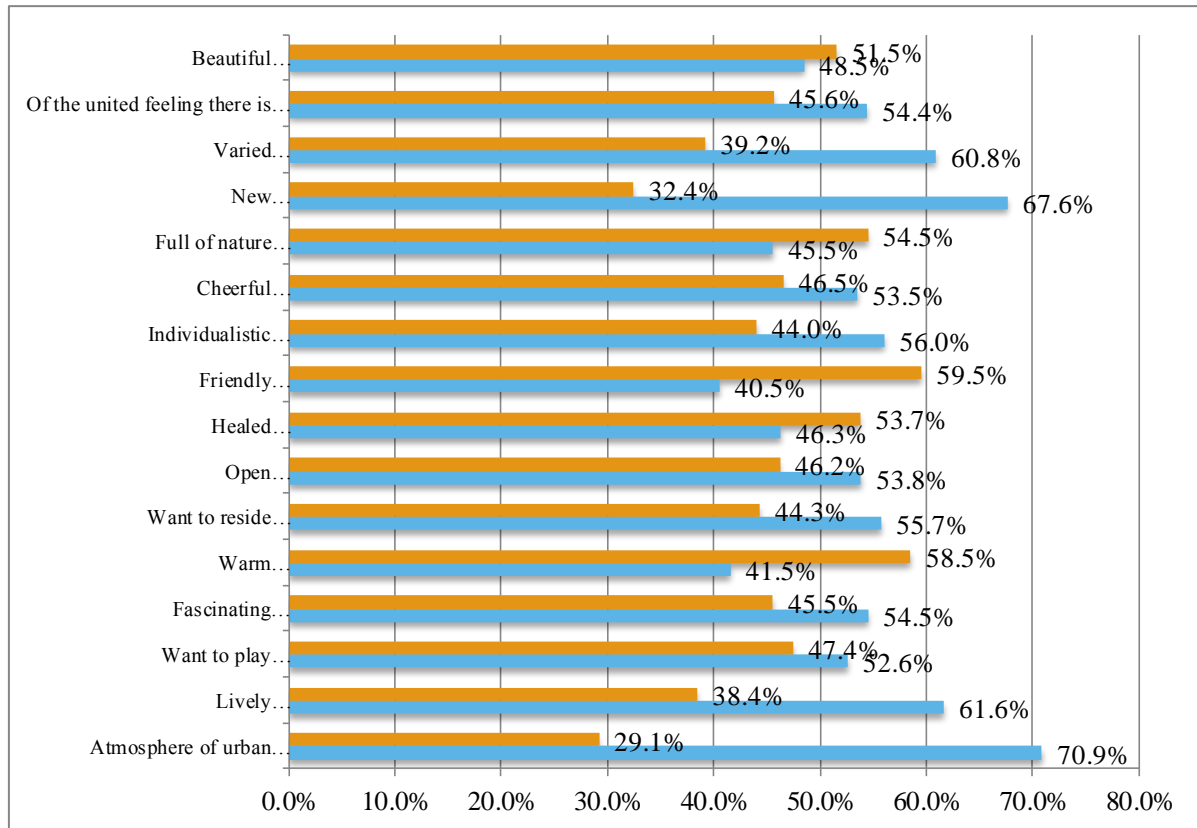
Figure 6. How do you feel about the image of the surrounding area at this shopping street? (Q3)

7) There are many old building at the age of nearly 50 years. Do you think we can still use them? (Q4)

Can use it 44.1%, Cannot use it 31.4%, Have no idea 24.5%

These are exhibited in Figure 7.
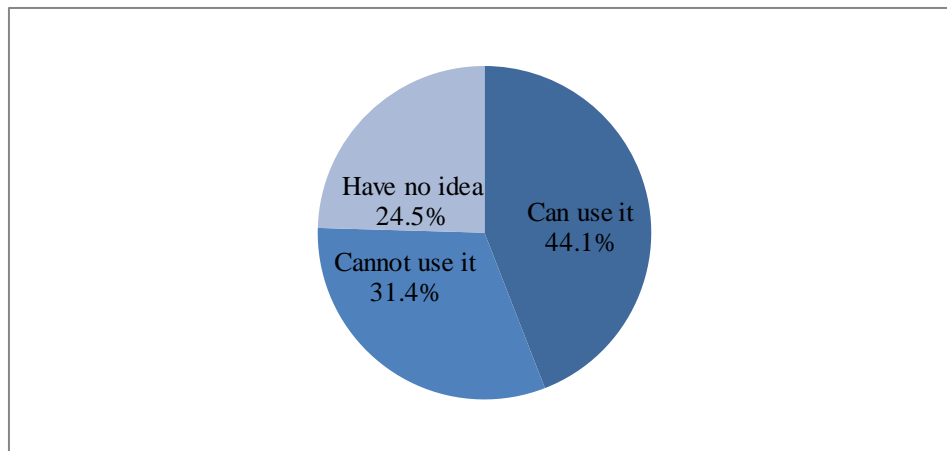
Figure 7. There are many old building at the age of nearly 50 years. Do you think we can still use them? (Q4)

3. Bayesian Network Analysis

In constructing Bayesian Network, it is required to check the causal relationship among groups of items.

Based on this, a model is built as is shown in Figure 8.
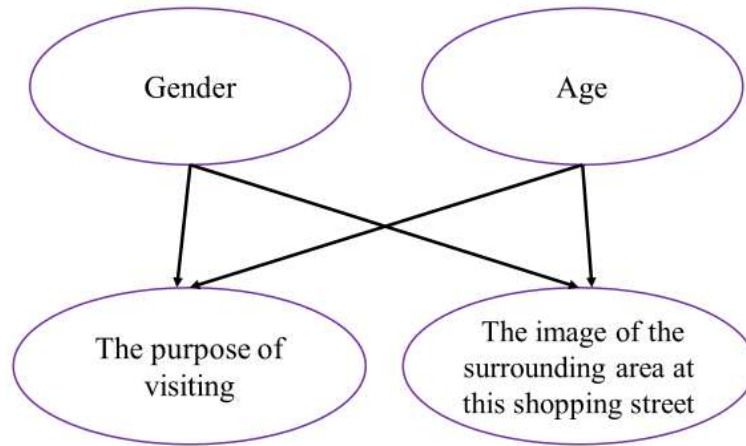
Figure 8. A Built Model

We used BAYONET software (http://www.msi.co.jp/BAYONET/). When plural nodes exist in the same group, it occurs that causal relationship is hard to set a priori. In that case, BAYONET system set the sequence automatically utilizing AIC standard. Node and parameter of Figure 8 are exhibited in Table 1.

Table 1. Node and Parameter

Node	Parameter									
	1	2	3	4	5	6	7	8	9	10
Gender	Male	Female								
Age	10th	20th	30th	40th	50th	60th	More than 70			
The purpose of visiting	Shopping	Eating and drinking	Business	Celebration、event	Leisure, amusement	miscellaneous				
The image of the surrounding area at this shopping street	Beautiful	Ugly	Of the united feeling there is	Scattered	Varied	Featureless	New	Historic	Full of nature	Urban

Node	Parameter									
	11	12	13	14	15	16	17	18	19	20
The image of the surrounding area at this shopping street	Cheerful	Gloomy	Individualistic	Conventional	Friendly	Unfriendly	Healed	Stimulated	Open	Exclusive

Node	Parameter									
	21	22	23	24	25	26	27	28	29	30
The image of the surrounding area at this shopping street	Want to reside	Do not want to reside	Warm	Aloof	Fascinating	Not fascinating	Want to play	Want to examine deliberately	Lively	Calm

Node	Parameter	
	31	32
The image of the surrounding area at this shopping street	Atmosphere of urban	Atmosphere of rural area

4. Sensitivity Analysis

Now, posterior probability is calculated by setting evidence as, for example, 1.0. Comparing Prior probability and Posterior probability, we can seek the change and confirm the preference or image of the surrounding area at this shopping street. We set evidence to all parameters. Therefore the analysis volume becomes too large. In this paper, we focus on "The image of the surrounding area at this shopping street" and pick up former half and make sensitivity analysis. We prepare another paper for the rest of them.

As stated above, we set evidence for each parameter, and the calculated posterior probability is exhibited in Appendix 2. The value of "Posterior probability – Prior probability" (we call this "Difference of probability"

hereafter) is exhibited in Appendix 3. The sensitivity analysis is executed by mainly using this table.

Here, we classify each item by the strength of the difference of probability.

・Strong (++,－－): Select major parameter of which absolute value of difference of probability is more than 0.05

・Medium (+,－): Select major parameter of which absolute value of difference of probability is more than 0.01

・Weak: Else

In selecting items, negative value does not necessarily have distinct meaning, therefore we mainly pick up positive value in the case meaning is not clear.

Now we examine each for Strong and Medium case.

4.1 Sensitively Analysis for "The Image Of the Surrounding Area at this Shopping Street"

1) Setting evidence to "Beautiful"

After setting evidence to "Beautiful", the result is exhibited in Table 2.

Table 2. Setting evidence to "Beautiful" case

Eating and drinking	－
Scattered	－
Fascinating	＋
Want to play	＋
Lively	＋
Male	－
Female	＋
Age: 10th	＋＋
Age: 20th	＋＋
Age: 30th	＋
Age: 40th	－－
Age: 50th	－－
Age: 60th	－－
Age: More than 70	＋

We can observe that "Those who have an image of the surrounding area at this shopping street as "Beautiful" had come under the image of the surrounding area at this shopping street as "Fascinating", "Want to play" or "Lively" of an age of "10th","20th", "30th" or "More than 70" in which the gender is "Female". (Strong part is indicated by bold font.)

2) Setting evidence to "Ugly"

After setting evidence to "Ugly", the result is exhibited in Table 3.

Table 3. Setting evidence to "Ugly" case

Want to play	－
Age: 10th	－
Age: 20th	－
Age: 30th	－
Age: 40th	＋
Age: 50th	＋＋
Age: More than 70	＋

We can observe that "Those who have an image of the surrounding area at this shopping street as "Ugly" had come by an age of "40th ", "50th" or "More than 70".

3) Setting evidence to "Of the united feeling there is"

After setting evidence to "Of the united feeling there is", the result is exhibited in Table 4.

Table 4. Setting evidence to "Of the united feeling there is" case

Eating and drinking	−
Cheerful	+
Individualistic	+
Friendly	+
Unfriendly	−
Healed	+
Stimulated	−
Open	+
Fascinating	+
Want to play	+
Lively	+
Atmosphere of urban	+
Age: 10th	++
Age: 20th	+
Age: 30th	− −
Age: 40th	+
Age: 50th	− −
Age: 60th	− −
Age: More than 70	− −

We can observe that "Those who have an image of the surrounding area at this shopping street as "Of the united feeling there is" had come under the image of the surrounding area at this shopping street as "Cheerful", "Individualistic", "Friendly", "Healed", "Open", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th","20th" or "40th".

4) Setting evidence to "Scattered"

After setting evidence to "Scattered", the result is exhibited in Table 5.

Table 5. Setting evidence to "Scattered" case

Shopping	+
Eating and drinking	+
Varied	−
Cheerful	−
Individualistic	−
Friendly	−
Unfriendly	+
Healed	−
Stimulated	+
Open	−
Aloof	+
Fascinating	−
Want to play	−
Lively	−
Atmosphere of urban	−
Age: 10th	− −
Age: 20th	− −
Age: 30th	−
Age: 40th	++
Age: 50th	++
Age: 60th	++
Age: More than 70	++

We can observe that "Those who have an image of the surrounding area at this shopping street as "Scattered" had come with the purpose of visiting for "Shopping" or "Eating and drinking" under the image of the surrounding area at this shopping street as "Unfriendly", "Stimulated" or "Aloof" of an age of "40th","50th", "60th" or "More than 70".

5) Setting evidence to "Varied"

After setting evidence to "Varied", the result is exhibited in Table 6.

Table 6. Setting evidence to "Varied" case

Age: 10th	++
Age: 20th	+
Age: 40th	− −
Age: 50th	+
Age: 60th	− −
Age: More than 70	+

We can observe that "Those who have an image of the surrounding area at this shopping street as "Varied" had come by an age of "10th","20th", "50th" or "More than 70".

6) Setting Evidence to "Featureless"

After setting evidence to "Featureless", the result is exhibited in Table 7.

Table 7. Setting evidence to "Featureless" case

Individualistic	−
Fascinating	−
Want to play	−
Lively	−
Age: 10th	−−
Age: 20th	−−
Age: 30th	+
Age: 40th	+
Age: 50th	−−
Age: 60th	++
Age: More than 70	++

We can observe that "Those who have an image of the surrounding area at this shopping street as "Featureless" had come by an age of "30th","40th", "**60th**" or "**More than 70**".

7) Setting Evidence to "New"

After setting evidence to "New", the result is exhibited in Table 8.

Table 8. Setting evidence to "New" case

Male	−
Female	+
Age: 10th	−
Age: 20th	++
Age: 30th	−
Age: 60th	+

We can observe that "Those who have an image of the surrounding area at this shopping street as "New" had come by an age of "**20th**" or "60th" in which the gender is "Female".

8) Setting evidence to "Historic"

After setting evidence to "Historic", the result is exhibited in Table 9.

Table 9. Setting evidence to "Historic" case

Age: 20th	−
Age: 30th	+
Age: 50th	−−
Age: More than 70	+

We can observe that "Those who have an image of the surrounding area at this shopping street as "Historic" had come by an age of "30th" or "More than 70".

9) Setting evidence to "Full of nature"

After setting evidence to "Full of nature", the result is exhibited in Table 10.

Table 10. Setting evidence to "Full of nature" case

Eating and drinking	−
Fascinating	+
Male	−
Female	+
Age: 10th	++
Age: 20th	+
Age: 40th	−−
Age: 50th	−
Age: 60th	−
Age: More than 70	++

We can observe that "Those who have an image of the surrounding area at this shopping street as "Full of nature" had come under the image of the surrounding area at this shopping street as "Fascinating" of an age of "10th","20th" or "More than 70" in which the gender is "Female".

10) Setting evidence to "Urban"

After setting evidence to "Urban", the result is exhibited in Table 11.

Table 11. Setting evidence to "Urban" case

Age: 10th	+
Age: 20th	− −
Age: 30th	−
Age: 40th	−
Age: 60th	+
Age: More than 70	+

We can observe that "Those who have an image of the surrounding area at this shopping street as "Urban" had come by an age of "10th"," 60th", or "More than 70".

11) Setting evidence to "Cheerful"

After setting evidence to "Cheerful", the result is exhibited in Table 12.

Table 12. Setting evidence to "Cheerful" case

Eating and drinking	−
Of the united feeling there is	+
Scattered	−
Individualistic	+
Friendly	+
Unfriendly	−
Healed	+
Stimulated	−
Open	+
Fascinating	+
Want to play	+
Lively	+
Atmosphere of urban	+
Age: 10th	+
Age: 20th	+ +
Age: 30th	−
Age: 40th	−
Age: 50th	− −
Age: 60th	− −
Age: More than 70	−

We can observe that "Those who have an image of the surrounding area at this shopping street as "Cheerful" had come under the image of the surrounding area at this shopping street as "Of the united feeling there is", "Individualistic", "Healed", "Open", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th" or "20th".

12) Setting evidence to "Gloomy"

After setting evidence to "Gloomy", the result is exhibited in Table 13.

Table 13. Setting evidence to "Gloomy" case

Eating and drinking	+
Of the united feeling there is	−
Scattered	+
Individualistic	−
Unfriendly	+
Healed	−
Stimulated	+
Fascinating	−
Want to play	−
Lively	−
Male	+
Female	−
Age: 10th	−
Age: 50th	+
Age: 60th	+ +
Age: More than 70	+ +

We can observe that "Those who have an image of the surrounding area at this shopping street as "Gloomy" had come with the purpose of visiting for "Eating and drinking" under the image of the surrounding area at this

shopping street as "Scattered", "Unfriendly" or "Stimulated" of an age of "50th", "60th" or "More than 70" in which the gender is "Male".

13) Setting evidence to "Individualistic"

After setting evidence to "Individualistic", the result is exhibited in Table 14.

Table 14. Setting evidence to "Individualistic" case

Eating and drinking	−
Of the united feeling there is	+
Scattered	−
Cheerful	+
Friendly	+
Unfriendly	−
Healed	+
Fascinating	+
Want to play	+
Lively	+
Atmosphere of urban	+
Age: 10th	+
Age: 30th	− −
Age: 40th	−
Age: 60th	− −
Age: More than 70	− −

We can observe that "Those who have an image of the surrounding area at this shopping street as "Individualistic" had come under the image of the surrounding area at this shopping street as "Of the united feeling there is", "Cheerful", "Friendly", "Healed", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th".

14) Setting evidence to "Conventional"

After setting evidence to "Conventional", the result is exhibited in Table 15.

Table 15. Setting evidence to "Conventional" case

Eating and drinking	+
Of the united feeling there is	−
Cheerful	−
Friendly	−
Unfriendly	+
Fascinating	−
Want to play	−
Lively	−
Atmosphere of urban	−
Age: 10th	− −
Age: 20th	+
Age: 30th	+
Age: 50th	+
Age: 60th	+ +
Age: More than 70	+

We can observe that "Those who have an image of the surrounding area at this shopping street as "Conventional" had come with the purpose of visiting for "Eating and drinking" under the image of the surrounding area at this shopping street as "Unfriendly" of an age of "20th","30th", "50th", "60th" or "More than 70".

15) Setting evidence to "Friendly"

After setting evidence to "Friendly", the result is exhibited in Table 16.

Table 16. Setting evidence to "Friendly" case

Shopping	−
Eating and drinking	−
Celebration、event	−
Beautiful	+
Of the united feeling there is	+
Scattered	−
Varied	+
New	−
Cheerful	+
Gloomy	−
Individualistic	+
Conventional	−
Healed	+
Stimulated	−
Open	+
Exclusive	−
Aloof	−
Fascinating	+
Not Fascinating	−
Want to play	+
Lively	+
Atmosphere of urban	+
Age: 10th	+ +
Age: 20th	−
Age: 40th	− −
Age: 50th	− −
Age: 60th	− −
Age: More than 70	− −

We can observe that "Those who have an image of the surrounding area at this shopping street as "Friendly" had come under the image of the surrounding area at this shopping street as "Beautiful", "Of the united feeling there is", "Varied", "Cheerful", "Individualistic", "Healed", "Open", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th".

16) Setting evidence to "Unfriendly"

After setting evidence to "Unfriendly", the result is exhibited in Table 17.

Table 17. Setting evidence to "Unfriendly" case

Individualistic	−
Want to play	−
Lively	−
Age: 10th	− −
Age: 20th	+
Age: 30th	−
Age: 40th	−
Age: 50th	− −
Age: 60th	− −
Age: More than 70	− −

We can observe that "Those who have an image of the surrounding area at this shopping street as "Unfriendly" had come by an age of "20th".

5. Remarks

The Results for Bayesian Network Analysis are as follows.

In the Bayesian Network Analysis, model was built under the examination of the causal relationship among items. Sensitively Analysis was conducted after that. The main result of sensitively analysis is as follows.

We can observe that "Those who have an image of the surrounding area at this shopping street as "Beautiful" had come under the image of the surrounding area at this shopping street as "Fascinating", "Want to play" or "Lively" of an age of "10th","20th", "30th" or "More than 70" in which the gender is "Female".

We can observe that "Those who have an image of the surrounding area at this shopping street as "Of the united feeling there is" had come under the image of the surrounding area at this shopping street as "Cheerful", "Individualistic", "Friendly", "Healed", "Open", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th","20th " or "40th".

We can observe that "Those who have an image of the surrounding area at this shopping street as "Scattered" had come with the purpose of visiting for "Shopping" or "Eating and drinking" under the image of the surrounding area at this shopping street as "Unfriendly", "Stimulated" or "Aloof" of an age of "40th","50th", "60th" or "More than 70".

We can observe that "Those who have an image of the surrounding area at this shopping street as "Cheerful" had come under the image of the surrounding area at this shopping street as "Of the united feeling there is", "Individualistic", "Healed", "Open", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th" or "20th".

We can observe that "Those who have an image of the surrounding area at this shopping street as "Friendly" had come under the image of the surrounding area at this shopping street as "Beautiful", "Of the united feeling there is", "Varied", "Cheerful", "Individualistic", "Healed", "Open", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th".

These results are very impressive to planners of tourism in Fuji city. These may be utilized to much more useful plan building for the activation of the related shopping street town.

6. Conclusion

Shopping streets at local city in Japan became old and are generally declining. In this paper, we handle the area rebirth and/or regional revitalization of shopping street. We focus on Fuji city in Japan. Four big festivals are held at Fuji city. Many people visit these festivals including residents in that area. Therefore a questionnaire investigation to the residents and visitors is conducted during these periods in order to clarify residents and visitors' needs for the shopping street, and utilize them to the plan building of the area rebirth and/or regional revitalization of shopping street. These are analyzed by using Bayesian Network. Sensitivity analysis is also conducted. As there are so many items, we focus on "The image of the surrounding area at this shopping street" and pick up former half and make sensitivity analysis in this paper. By that model, the causal relationship is sequentially chained by the characteristics of visitors, the purpose of visiting and the image of the surrounding area at this shopping street.

The Results for Bayesian Network Analysis are as follows.

In the Bayesian Network Analysis, model was built under the examination of the causal relationship among items. Sensitively Analysis was conducted after that. The main result of sensitively analysis is as follows.

We can observe that "Those who have an image of the surrounding area at this shopping street as "Of the united feeling there is" had come under the image of the surrounding area at this shopping street as "Cheerful", "Individualistic", "Friendly", "Healed", "Open", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th","20th" or "40th".

We can observe that "Those who have an image of the surrounding area at this shopping street as "Cheerful" had come under the image of the surrounding area at this shopping street as "Of the united feeling there is", "Individualistic", "Healed", "Open", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th" or "20th".

We can observe that "Those who have an image of the surrounding area at this shopping street as "Friendly" had come under the image of the surrounding area at this shopping street as "Beautiful", "Of the united feeling there is", "Varied", "Cheerful", "Individualistic", "Healed", "Open", "Fascinating", "Want to play", "Lively" or "Atmosphere of urban" of an age of "10th".

The analysis utilizing Bayesian Network enabled us to visualize the causal relationship among items. Furthermore, sensitivity analysis brought us estimating and predicting the prospective visitors. These are utilized for constructing a much more effective and useful plan building. There are few papers which applies Bayesian Network to the tourism theme. This may be the first trial and has significant meaning.

Although it has a limitation that it is restricted in the number of research, we could obtain the fruitful results. To confirm the findings by utilizing the new consecutive visiting records would be the future works to be investigated.

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APPENDIX 1

Questionnaire Sheet about the Image Around the Shopping Street

1. How often do you come to this shopping street?

a. Everyday   b. (   ) times a week   c. (   ) times a month   d. (   ) times a year

e. miscellaneous (   )

2. What is the purpose of visiting here? (Plural answers allowed)

a. shopping   b. eating and drinking   c. business   d. celebration、event   e. leisure, amusement

f. miscellaneous (   )

3. How do you feel about the image of the surrounding area at this shopping street?

Select the position

Beautiful	·	·	·	·	·	Ugly
Of the united feeling there is	·	·	·	·	·	Scattered
Varied	·	·	·	·	·	Featureless
New	·	·	·	·	·	Historic
Full of nature	·	·	·	·	·	Urban
Cheerful	·	·	·	·	·	Gloomy
Individualistic	·	·	·	·	·	Conventional
Friendly	·	·	·	·	·	Unfriendly
Healed	·	·	·	·	·	Stimulated
Open	·	·	·	·	·	exclusive
Want to reside	·	·	·	·	·	Do not want to reside
Warm	·	·	·	·	·	Aloof
Fascinating	·	·	·	·	·	Not fascinating
Want to play	·	·	·	·	·	Want to examine deliberately
Lively	·	·	·	·	·	Calm
Atmosphere of urban	·	·	·	·	·	Atmosphere of rural area

4. There are many old building at the age of nearly 50 years. Do you think we can still use them?

a. Can use it   b. Cannot use it   C. Have no idea

5. Is there any functions or facilities that will be useful?

6. Comments

7. Sex

a. Male b. Female

8. Age

a.10th   b.20th   c.30th   d.40th   e.50th   f.6th   g. More than70

9. Residence

a. Fuji City   b. Fujinomiya City   c. Numazu City   d. Mishima City   e. Shizuoka City   f. Miscellaneous in Shizuoka Prefecture

g. Outside of Shizuoka Prefecture ［   ］

APPENDIX 2

Calculated posterior probability

name	state	Prior	The purpose of visiting					
			Shopping	Eating drinking	and	Business	Celebration event	Leisure, amusement
The purpose of visiting	Shopping	0.224	1		0.213	0.219	0.221	0.238
	Eating and drinking	0.163	0.156		1	0.168	0.170	0.146
	Business	0.087	0.085		0.090	1	0.088	0.084
	Celebration、event	0.466	0.460		0.485	0.469	1	0.453
	Leisure, amusement	0.058	0.062		0.053	0.056	0.057	1
The image of the surrounding area at this shopping street	Beautiful	0.327	0.324		0.311	0.324	0.322	0.333
	Ugly	0.275	0.279		0.279	0.275	0.278	0.276
	Of the united feeling there is	0.269	0.264		0.256	0.270	0.262	0.265
	Scattered	0.377	0.387		0.393	0.378	0.384	0.379
	Varied	0.177	0.172		0.171	0.177	0.175	0.175
	Featureless	0.473	0.479		0.477	0.474	0.476	0.478
	New	0.130	0.133		0.130	0.128	0.129	0.131
	Historic	0.587	0.584		0.589	0.587	0.588	0.587
	Full of nature	0.352	0.353		0.337	0.349	0.348	0.358
	Urban	0.236	0.238		0.233	0.237	0.235	0.241
	Cheerful	0.295	0.290		0.283	0.296	0.289	0.292
	Gloomy	0.406	0.412		0.416	0.408	0.410	0.405
	Individualistic	0.252	0.245		0.237	0.253	0.245	0.250
	Conventional	0.406	0.410		0.424	0.407	0.413	0.404
	Friendly	0.468	0.458		0.444	0.468	0.458	0.469
	Unfriendly	0.220	0.229		0.228	0.220	0.224	0.224
	Healed	0.294	0.285		0.286	0.294	0.289	0.291
	Stimulated	0.197	0.206		0.200	0.197	0.199	0.202
	Open	0.264	0.258		0.256	0.266	0.260	0.262
	Exclusive	0.376	0.387		0.385	0.374	0.380	0.380
	Want to reside	0.251	0.254		0.245	0.251	0.249	0.253
	Do not want to reside	0.393	0.394		0.393	0.394	0.392	0.395
	Warm	0.444	0.446		0.426	0.440	0.437	0.453
	Aloof	0.216	0.217		0.225	0.218	0.219	0.212
	Fascinating	0.264	0.258		0.249	0.263	0.257	0.265
	Not fascinating	0.383	0.389		0.390	0.383	0.388	0.387
	Want to play	0.232	0.222		0.217	0.231	0.224	0.230
	Want to examine deliberately	0.320	0.337		0.311	0.315	0.317	0.339
	Lively	0.207	0.196		0.197	0.210	0.202	0.198
	Calm	0.513	0.528		0.514	0.509	0.515	0.528
	Atmosphere of urban	0.102	0.099		0.097	0.104	0.101	0.098
	Atmosphere of rural area	0.625	0.636		0.629	0.621	0.627	0.637
Gender	Male	0.489	0.406		0.602	0.558	0.517	0.343
	Female	0.511	0.594		0.398	0.442	0.483	0.657
Age	10th	0.162	0.136		0.067	0.162	0.121	0.180
	20th	0.148	0.151		0.164	0.148	0.138	0.119
	30th	0.223	0.167		0.255	0.223	0.253	0.215
	40th	0.174	0.189		0.215	0.174	0.183	0.147
	50th	0.116	0.117		0.155	0.116	0.130	0.105
	60th	0.105	0.129		0.100	0.105	0.100	0.136
	More than70	0.072	0.110		0.043	0.072	0.075	0.098

The image of the surrounding area at this shopping street								
Beautiful	Ugly	Of the united feeling there is	Scattered	Varied	Featureless	New	Historic	Full of nature
0.222	0.226	0.220	0.229	0.219	0.226	0.231	0.223	0.225
0.156	0.165	0.156	0.169	0.158	0.164	0.164	0.163	0.157
0.086	0.087	0.087	0.087	0.087	0.087	0.087	0.086	0.087
0.459	0.470	0.453	0.474	0.461	0.469	0.465	0.467	0.460
0.060	0.058	0.058	0.058	0.058	0.058	0.059	0.059	0.060
1	0	0.332	0.315	0.335	0.323	0.325	0.327	0.334
0	1	0.270	0.281	0.274	0.276	0.276	0.274	0.274
0.274	0.264	1	0	0.275	0.265	0.266	0.269	0.272
0.364	0.385	0	1	0.366	0.384	0.381	0.376	0.369
0.181	0.176	0.181	0.171	1	0	0.174	0.177	0.180
0.467	0.474	0.466	0.482	0	1	0.471	0.474	0.468
0.129	0.130	0.128	0.131	0.128	0.129	1	0	0.130
0.588	0.585	0.586	0.585	0.586	0.588	0	1	0.586
0.360	0.350	0.356	0.345	0.360	0.348	0.352	0.352	1
0.234	0.236	0.233	0.239	0.233	0.239	0.234	0.236	0
0.303	0.290	0.310	0.283	0.304	0.290	0.293	0.295	0.301
0.399	0.408	0.395	0.415	0.398	0.411	0.410	0.406	0.401
0.257	0.249	0.266	0.242	0.261	0.246	0.247	0.251	0.256
0.401	0.409	0.392	0.415	0.399	0.412	0.406	0.406	0.402
0.479	0.461	0.487	0.451	0.480	0.462	0.457	0.468	0.475
0.216	0.224	0.212	0.228	0.215	0.224	0.225	0.220	0.218
0.301	0.288	0.306	0.282	0.302	0.288	0.291	0.294	0.298
0.193	0.201	0.190	0.205	0.193	0.200	0.200	0.196	0.196
0.269	0.259	0.275	0.256	0.268	0.263	0.261	0.265	0.267
0.372	0.380	0.367	0.383	0.370	0.378	0.385	0.375	0.374

0.254	0.251	0.256	0.248	0.255	0.250	0.251	0.251	0.254
0.389	0.392	0.393	0.397	0.387	0.398	0.391	0.394	0.390
0.450	0.440	0.455	0.436	0.448	0.442	0.443	0.444	0.449
0.211	0.219	0.212	0.222	0.213	0.217	0.218	0.216	0.213
0.274	0.259	0.279	0.250	0.275	0.258	0.260	0.264	0.272
0.378	0.386	0.372	0.392	0.376	0.389	0.386	0.384	0.379
0.241	0.224	0.251	0.215	0.241	0.225	0.227	0.233	0.237
0.318	0.320	0.314	0.326	0.312	0.325	0.327	0.319	0.320
0.213	0.202	0.219	0.196	0.216	0.201	0.202	0.207	0.211
0.509	0.518	0.502	0.523	0.505	0.518	0.519	0.513	0.511
0.103	0.102	0.107	0.099	0.105	0.101	0.098	0.102	0.103
0.620	0.629	0.614	0.635	0.617	0.629	0.630	0.624	0.622
0.457	0.488	0.497	0.499	0.496	0.499	0.444	0.494	0.461
0.543	0.512	0.503	0.501	0.504	0.501	0.556	0.506	0.539
0.194	0.141	0.236	0.111	0.206	0.143	0.123	0.160	0.187
0.168	0.131	0.163	0.119	0.160	0.122	0.197	0.143	0.164
0.248	0.211	0.187	0.204	0.229	0.229	0.190	0.238	0.224
0.131	0.183	0.189	0.200	0.132	0.188	0.182	0.175	0.141
0.096	0.147	0.085	0.147	0.127	0.102	0.123	0.105	0.113
0.088	0.102	0.082	0.139	0.069	0.133	0.118	0.105	0.090
0.076	0.084	0.058	0.081	0.076	0.083	0.067	0.073	0.082

Urban	Cheerful	Gloomy	Individualistic	Conventional	Friendly	Unfriendly	Healed	Stimulated
0.226	0.220	0.226	0.218	0.225	0.219	0.232	0.217	0.232
0.160	0.156	0.167	0.154	0.170	0.155	0.167	0.158	0.165
0.088	0.087	0.088	0.087	0.087	0.087	0.087	0.087	0.087
0.464	0.455	0.471	0.453	0.474	0.456	0.473	0.458	0.470
0.060	0.058	0.058	0.058	0.058	0.059	0.059	0.058	0.060
0.325	0.335	0.322	0.333	0.323	0.334	0.321	0.335	0.319
0.275	0.270	0.277	0.272	0.277	0.271	0.279	0.270	0.281
0.267	0.283	0.262	0.285	0.260	0.280	0.258	0.281	0.259
0.383	0.362	0.386	0.363	0.385	0.364	0.390	0.361	0.393
0.175	0.182	0.173	0.183	0.174	0.182	0.173	0.181	0.174
0.480	0.464	0.479	0.462	0.477	0.467	0.480	0.464	0.481
0.129	0.129	0.131	0.127	0.132	0.127	0.133	0.128	0.132
0.587	0.586	0.587	0.584	0.587	0.587	0.586	0.587	0.584
0	0.358	0.348	0.359	0.349	0.358	0.349	0.357	0.349
1	0.233	0.238	0.235	0.236	0.236	0.237	0.232	0.242
0.292	1	0	0.310	0.287	0.306	0.285	0.307	0.285
0.410	0	1	0.393	0.413	0.396	0.416	0.396	0.416
0.252	0.264	0.244	1	0	0.264	0.240	0.263	0.244
0.406	0.395	0.414	0	1	0.394	0.417	0.397	0.413
0.468	0.485	0.457	0.490	0.454	1	0	0.484	0.455
0.222	0.213	0.226	0.210	0.227	0	1	0.212	0.229
0.289	0.306	0.287	0.306	0.287	0.304	0.283	1	0
0.202	0.190	0.202	0.191	0.201	0.191	0.205	0	1
0.265	0.274	0.260	0.274	0.259	0.273	0.256	0.273	0.256
0.373	0.368	0.381	0.364	0.383	0.366	0.386	0.369	0.382
0.251	0.256	0.250	0.255	0.249	0.254	0.251	0.254	0.251
0.400	0.390	0.396	0.391	0.393	0.392	0.394	0.390	0.397
0.444	0.453	0.438	0.455	0.436	0.453	0.436	0.452	0.437
0.217	0.212	0.219	0.213	0.219	0.212	0.220	0.212	0.221
0.260	0.279	0.256	0.279	0.255	0.277	0.253	0.277	0.253
0.387	0.373	0.389	0.371	0.390	0.375	0.392	0.374	0.391
0.226	0.249	0.221	0.250	0.221	0.247	0.216	0.249	0.214
0.326	0.314	0.325	0.311	0.323	0.315	0.329	0.312	0.330
0.206	0.219	0.201	0.221	0.200	0.218	0.196	0.218	0.198
0.516	0.503	0.519	0.501	0.519	0.504	0.524	0.502	0.524
0.101	0.106	0.100	0.107	0.099	0.106	0.099	0.105	0.099
0.629	0.614	0.630	0.614	0.630	0.616	0.634	0.615	0.635
0.503	0.494	0.507	0.497	0.499	0.491	0.484	0.489	0.496
0.497	0.506	0.493	0.503	0.501	0.509	0.516	0.511	0.504
0.173	0.224	0.121	0.256	0.105	0.232	0.097	0.214	0.124
0.121	0.179	0.149	0.147	0.159	0.144	0.155	0.173	0.134
0.209	0.202	0.220	0.187	0.244	0.220	0.213	0.230	0.181
0.149	0.163	0.176	0.157	0.172	0.153	0.180	0.163	0.160
0.116	0.091	0.120	0.119	0.125	0.096	0.128	0.094	0.149
0.154	0.078	0.132	0.080	0.119	0.090	0.128	0.075	0.148
0.078	0.063	0.083	0.054	0.077	0.065	0.099	0.051	0.103

Open	Exclusive	Want to reside	Do not want to reside	Warm	Aloof	Fascinating	Not fascinating	Want to play
0.219	0.229	0.226	0.224	0.224	0.223	0.219	0.226	0.214
0.158	0.167	0.158	0.163	0.156	0.170	0.153	0.166	0.153
0.088	0.087	0.087	0.088	0.086	0.088	0.087	0.087	0.087
0.457	0.471	0.461	0.465	0.458	0.472	0.453	0.471	0.450
0.058	0.059	0.059	0.059	0.060	0.057	0.059	0.059	0.058
0.332	0.323	0.330	0.324	0.331	0.319	0.339	0.322	0.340
0.269	0.278	0.274	0.274	0.272	0.279	0.269	0.277	0.265
0.280	0.263	0.274	0.269	0.276	0.264	0.284	0.262	0.292
0.365	0.385	0.372	0.381	0.370	0.388	0.356	0.386	0.350
0.179	0.174	0.179	0.174	0.178	0.174	0.184	0.173	0.184
0.470	0.475	0.471	0.479	0.470	0.475	0.461	0.480	0.459
0.128	0.133	0.130	0.129	0.129	0.131	0.128	0.130	0.127
0.588	0.586	0.586	0.587	0.586	0.585	0.587	0.587	0.588
0.355	0.350	0.356	0.349	0.356	0.347	0.362	0.349	0.360
0.236	0.234	0.235	0.240	0.235	0.237	0.232	0.238	0.229
0.306	0.289	0.301	0.293	0.301	0.289	0.312	0.287	0.317
0.399	0.411	0.403	0.409	0.400	0.411	0.392	0.412	0.386
0.261	0.244	0.256	0.251	0.258	0.248	0.266	0.244	0.271
0.397	0.414	0.402	0.406	0.399	0.412	0.392	0.413	0.386
0.483	0.455	0.474	0.467	0.477	0.458	0.490	0.458	0.498
0.214	0.226	0.220	0.221	0.216	0.224	0.211	0.225	0.205
0.304	0.288	0.297	0.292	0.299	0.288	0.309	0.287	0.315
0.191	0.200	0.197	0.199	0.194	0.202	0.188	0.201	0.182
1	0	0.267	0.266	0.269	0.259	0.275	0.260	0.281
0	1	0.374	0.375	0.372	0.380	0.366	0.381	0.362
0.254	0.250	1	0	0.253	0.249	0.257	0.249	0.256
0.395	0.391	0	1	0.393	0.394	0.388	0.396	0.389
0.452	0.440	0.448	0.444	1	0	0.456	0.439	0.462
0.212	0.219	0.214	0.217	0	1	0.209	0.219	0.207
0.274	0.257	0.270	0.261	0.271	0.256	1	0	0.288
0.377	0.388	0.379	0.386	0.379	0.387	0	1	0.367
0.246	0.223	0.236	0.230	0.241	0.223	0.253	0.222	1
0.317	0.324	0.321	0.324	0.320	0.320	0.313	0.324	0
0.217	0.199	0.211	0.205	0.211	0.202	0.221	0.199	0.225
0.504	0.520	0.512	0.514	0.511	0.516	0.502	0.519	0.495
0.105	0.099	0.104	0.102	0.103	0.100	0.107	0.100	0.108
0.616	0.631	0.621	0.627	0.622	0.629	0.612	0.631	0.607
0.507	0.464	0.490	0.503	0.454	0.518	0.474	0.485	0.473
0.493	0.536	0.510	0.497	0.546	0.482	0.526	0.515	0.527
0.214	0.112	0.185	0.164	0.199	0.131	0.238	0.124	0.265
0.162	0.164	0.163	0.132	0.148	0.144	0.177	0.133	0.173

0.219	0.219	0.194	0.215	0.211	0.206	0.217	0.238	0.225
0.168	0.190	0.168	0.181	0.177	0.185	0.150	0.177	0.184
0.076	0.127	0.104	0.102	0.100	0.150	0.087	0.121	0.062
0.102	0.108	0.092	0.137	0.100	0.120	0.062	0.129	0.053
0.059	0.080	0.094	0.069	0.066	0.064	0.069	0.078	0.037

Want to examine deliberately	Lively	Calm	Atmosphere of urban	Atmosphere of rural area
0.235	0.214	0.230	0.218	0.227
0.158	0.156	0.162	0.158	0.163
0.086	0.088	0.087	0.089	0.087
0.461	0.455	0.468	0.462	0.467
0.061	0.057	0.060	0.057	0.059
0.325	0.337	0.324	0.330	0.324
0.276	0.269	0.278	0.274	0.277
0.264	0.286	0.264	0.281	0.265
0.385	0.357	0.385	0.366	0.383
0.172	0.185	0.174	0.182	0.175
0.481	0.461	0.478	0.470	0.476
0.133	0.127	0.131	0.124	0.131
0.586	0.586	0.586	0.588	0.586
0.352	0.361	0.351	0.356	0.351
0.241	0.233	0.237	0.233	0.237
0.290	0.313	0.289	0.306	0.290
0.413	0.395	0.410	0.397	0.409
0.245	0.270	0.246	0.264	0.248
0.411	0.393	0.411	0.393	0.410
0.460	0.492	0.460	0.485	0.461
0.227	0.210	0.225	0.213	0.224
0.286	0.310	0.288	0.302	0.289
0.204	0.189	0.201	0.192	0.200
0.261	0.277	0.260	0.271	0.261
0.382	0.363	0.382	0.365	0.380
0.252	0.256	0.251	0.256	0.250
0.398	0.390	0.394	0.390	0.394
0.445	0.452	0.442	0.449	0.443
0.217	0.212	0.218	0.212	0.218
0.258	0.282	0.258	0.276	0.259
0.389	0.370	0.388	0.375	0.387
0	0.252	0.224	0.245	0.226
1	0.309	0.327	0.308	0.324
0.199	1	0	0.218	0.201
0.524	0	1	0.502	0.518
0.099	0.108	0.100	1	0
0.634	0.609	0.631	0	1
0.439	0.540	0.459	0.550	0.467
0.561	0.460	0.541	0.450	0.533
0.140	0.250	0.134	0.231	0.141
0.153	0.180	0.139	0.115	0.139
0.190	0.211	0.217	0.222	0.220
0.170	0.131	0.180	0.183	0.175
0.101	0.097	0.122	0.098	0.127
0.153	0.073	0.121	0.056	0.123
0.094	0.058	0.086	0.095	0.074

Gender		Age							
Male	Female	10th	20th	30th	40th	50th	60th	More than70
0.186	0.260	0.188	0.229	0.168	0.243	0.224	0.275	0.343
0.200	0.127	0.068	0.181	0.186	0.202	0.218	0.155	0.097
0.100	0.075	0.087	0.087	0.087	0.087	0.087	0.087	0.087
0.492	0.440	0.347	0.435	0.527	0.491	0.522	0.444	0.486
0.041	0.075	0.065	0.047	0.056	0.049	0.053	0.076	0.079
0.305	0.347	0.391	0.371	0.363	0.245	0.268	0.274	0.345
0.275	0.275	0.240	0.245	0.260	0.289	0.348	0.267	0.322
0.274	0.265	0.393	0.298	0.225	0.293	0.197	0.209	0.217
0.385	0.370	0.258	0.304	0.345	0.433	0.476	0.497	0.426
0.179	0.174	0.225	0.192	0.181	0.135	0.193	0.116	0.188
0.482	0.464	0.418	0.390	0.485	0.510	0.414	0.599	0.549
0.118	0.141	0.098	0.173	0.110	0.136	0.138	0.146	0.121
0.593	0.580	0.581	0.569	0.625	0.589	0.532	0.587	0.597
0.332	0.371	0.407	0.390	0.352	0.286	0.341	0.303	0.400
0.242	0.229	0.252	0.192	0.221	0.202	0.234	0.345	0.257
0.299	0.292	0.408	0.358	0.268	0.277	0.231	0.220	0.258
0.420	0.391	0.304	0.410	0.399	0.410	0.417	0.508	0.467
0.256	0.248	0.399	0.251	0.211	0.227	0.258	0.192	0.190
0.414	0.398	0.263	0.437	0.443	0.401	0.435	0.461	0.434
0.470	0.465	0.671	0.457	0.460	0.413	0.386	0.399	0.425
0.218	0.222	0.133	0.231	0.210	0.228	0.242	0.269	0.305
0.294	0.294	0.389	0.344	0.303	0.276	0.237	0.209	0.208
0.200	0.194	0.152	0.179	0.160	0.182	0.253	0.277	0.283
0.274	0.255	0.350	0.291	0.259	0.256	0.172	0.255	0.217
0.357	0.394	0.259	0.417	0.369	0.412	0.410	0.388	0.419
0.252	0.251	0.287	0.278	0.218	0.243	0.224	0.220	0.329
0.404	0.382	0.399	0.350	0.378	0.409	0.345	0.513	0.377
0.413	0.474	0.547	0.444	0.419	0.451	0.383	0.421	0.410
0.229	0.204	0.175	0.211	0.200	0.231	0.279	0.247	0.191
0.256	0.272	0.388	0.317	0.256	0.228	0.197	0.156	0.256
0.381	0.386	0.295	0.345	0.408	0.391	0.399	0.469	0.414
0.225	0.239	0.380	0.272	0.234	0.246	0.124	0.118	0.121
0.287	0.351	0.276	0.331	0.272	0.312	0.279	0.464	0.417
0.229	0.186	0.319	0.252	0.195	0.156	0.172	0.143	0.168
0.482	0.543	0.425	0.484	0.499	0.531	0.538	0.591	0.617
0.115	0.090	0.146	0.079	0.102	0.108	0.086	0.054	0.135
0.596	0.652	0.545	0.589	0.615	0.630	0.683	0.728	0.648
1	0	0.489	0.489	0.489	0.489	0.489	0.489	0.489
0	1	0.511	0.511	0.511	0.511	0.511	0.511	0.511
0.162	0.162	1	0	0	0	0	0	0
0.148	0.148	0	1	0	0	0	0	0
0.223	0.223	0	0	1	0	0	0	0
0.174	0.174	0	0	0	1	0	0	0
0.116	0.116	0	0	0	0	1	0	0
0.105	0.105	0	0	0	0	0	1	0
0.072	0.072	0	0	0	0	0	0	1

APPENDIX 3

Difference of probability

name	state	Prior	The purpose of visiting				
			Shopping	Eating and drinking	Business	Celebration、event	Leisure, amusement
The purpose of visiting	Shopping	0.224	1	-0.011	-0.005	-0.002	0.015
	Eating and drinking	0.163	-0.007	1	0.005	0.008	-0.017
	Business	0.087	-0.002	0.003	1	0.001	-0.004
	Celebration、event	0.466	-0.005	0.019	0.004	1	-0.013
	Leisure, amusement	0.058	0.004	-0.006	-0.002	-0.001	1
The image of the surrounding area at this shopping street	Beautiful	0.327	-0.002	-0.016	-0.003	-0.004	0.006
	Ugly	0.275	0.004	0.004	0.000	0.002	0.001
	Of the united feeling there is	0.269	-0.005	-0.014	0.001	-0.007	-0.004
	Scattered	0.377	0.010	0.016	0.001	0.007	0.002
	Varied	0.177	-0.004	-0.006	0.000	-0.002	-0.002
	Featureless	0.473	0.006	0.004	0.001	0.003	0.006
	New	0.130	0.004	0.000	-0.002	0.000	0.001
	Historic	0.587	-0.002	0.002	0.001	0.001	0.000
	Full of nature	0.352	0.001	-0.015	-0.003	-0.004	0.006
	Urban	0.236	0.002	-0.002	0.001	-0.001	0.005
	Cheerful	0.295	-0.006	-0.013	0.000	-0.007	-0.004
	Gloomy	0.406	0.007	0.011	0.002	0.005	0.000
	Individualistic	0.252	-0.007	-0.015	0.001	-0.007	-0.002
	Conventional	0.406	0.004	0.018	0.001	0.007	-0.002
	Friendly	0.468	-0.010	-0.023	0.000	-0.010	0.001
	Unfriendly	0.220	0.009	0.008	0.000	0.004	0.004
	Healed	0.294	-0.009	-0.008	0.000	-0.005	-0.003
	Stimulated	0.197	0.009	0.003	0.000	0.002	0.004
	Open	0.264	-0.006	-0.008	0.001	-0.005	-0.003
	Exclusive	0.376	0.010	0.009	-0.003	0.004	0.004
	Want to reside	0.251	0.003	-0.006	0.000	-0.003	0.002
	Do not want to reside	0.393	0.001	0.000	0.002	-0.001	0.002
	Warm	0.444	0.001	-0.019	-0.004	-0.007	0.009
	Aloof	0.216	0.001	0.009	0.002	0.003	-0.005
	Fascinating	0.264	-0.006	-0.016	-0.001	-0.007	0.001
	Not fascinating	0.383	0.005	0.007	0.000	0.004	0.004
	Want to play	0.232	-0.010	-0.015	-0.001	-0.008	-0.003
	Want to examine deliberately	0.320	0.017	-0.008	-0.004	-0.003	0.019
	Lively	0.207	-0.010	-0.009	0.003	-0.005	-0.008
	Calm	0.513	0.015	0.001	-0.004	0.002	0.015
	Atmosphere of urban	0.102	-0.003	-0.005	0.002	-0.001	-0.004
	Atmosphere of rural area	0.625	0.011	0.004	-0.004	0.002	0.013
Gender	Male	0.489	-0.082	0.113	0.069	0.028	-0.146
	Female	0.511	0.082	-0.113	-0.069	-0.028	0.146
Age	10th	0.162	-0.026	-0.094	0.000	-0.041	0.018
	20th	0.148	0.004	0.017	0.000	-0.010	-0.029
	30th	0.223	-0.056	0.031	0.000	0.029	-0.008
	40th	0.174	0.015	0.041	0.000	0.009	-0.027
	50th	0.116	0.000	0.039	0.000	0.014	-0.012
	60th	0.105	0.024	-0.005	0.000	-0.005	0.031
	More than70	0.072	0.038	-0.029	0.000	0.003	0.026

The image of the surrounding area at this shopping street							
Beautiful	Ugly	Of the united feeling there is	Scattered	Varied	Featureless	New	Historic	Full of nature
-0.001	0.003	-0.004	0.005	-0.004	0.002	0.007	-0.001	0.001
-0.007	0.003	-0.007	0.007	-0.004	0.001	0.002	0.000	-0.006
-0.001	0.000	0.000	0.000	0.000	0.000	-0.001	0.000	-0.001
-0.006	0.004	-0.012	0.008	-0.005	0.003	-0.001	0.001	-0.006
0.001	0.000	-0.001	0.000	0.000	0.000	0.001	0.000	0.001
1	0	0.005	-0.011	0.008	-0.004	-0.001	0.001	0.007
0	1	-0.005	0.006	-0.001	0.001	0.001	-0.001	-0.001
0.004	-0.005	1	0	0.006	-0.004	-0.003	0.000	0.003
-0.013	0.008	0	1	-0.012	0.007	0.004	-0.001	-0.008
0.004	-0.001	0.004	-0.005	1	0	-0.003	0.000	0.004
-0.006	0.001	-0.007	0.009	0	1	-0.002	0.002	-0.005
-0.001	0.000	-0.002	0.001	-0.002	-0.001	1	0	0.000
0.001	-0.002	0.000	-0.001	-0.001	0.002	0	1	0.000
0.008	-0.002	0.004	-0.008	0.007	-0.004	0.000	0.000	1

-0.001	0.000	-0.002	0.004	-0.002	0.004	-0.002	0.000	0
0.007	-0.005	0.014	-0.012	0.008	-0.006	-0.002	0.000	0.005
-0.006	0.003	-0.010	0.010	-0.008	0.005	0.005	0.000	-0.004
0.005	-0.003	0.014	-0.010	0.009	-0.006	-0.005	-0.001	0.004
-0.005	0.003	-0.014	0.009	-0.007	0.004	0.006	0.000	-0.004
0.011	-0.007	0.019	-0.016	0.013	-0.005	-0.010	0.000	0.008
-0.004	0.003	-0.009	0.008	-0.005	0.003	0.005	0.000	-0.002
0.007	-0.006	0.012	-0.012	0.008	-0.006	-0.003	0.000	0.004
-0.004	0.004	-0.007	0.008	-0.004	0.003	0.003	-0.001	-0.002
0.005	-0.006	0.011	-0.009	0.004	-0.002	-0.003	0.001	0.002
-0.004	0.004	-0.009	0.007	-0.006	0.001	0.009	-0.001	-0.002
0.003	-0.001	0.005	-0.003	0.003	-0.001	0.000	0.000	0.003
-0.004	-0.001	0.000	0.004	-0.006	0.005	-0.002	0.001	-0.003
0.006	-0.004	0.011	-0.008	0.004	-0.003	-0.001	0.000	0.004
-0.006	0.003	-0.004	0.006	-0.003	0.001	0.002	-0.001	-0.003
0.010	-0.005	0.014	-0.015	0.011	-0.007	-0.004	0.000	0.007
-0.005	0.003	-0.011	0.009	-0.007	0.005	0.002	0.001	-0.004
0.009	-0.008	0.019	-0.017	0.009	-0.007	-0.005	0.001	0.005
-0.001	0.001	-0.005	0.006	-0.007	0.005	0.008	0.000	0.000
0.007	-0.005	0.012	-0.011	0.010	-0.005	-0.005	0.000	0.005
-0.004	0.004	-0.011	0.010	-0.008	0.005	0.006	0.000	-0.002
0.001	0.000	0.004	-0.003	0.003	-0.001	-0.004	0.000	0.001
-0.005	0.004	-0.011	0.010	-0.008	0.004	0.006	-0.001	-0.003
-0.032	-0.001	0.008	0.010	0.007	0.010	-0.045	0.005	-0.028
0.032	0.001	-0.008	-0.010	-0.007	-0.010	0.045	-0.005	0.028
0.032	-0.021	0.074	-0.051	0.044	-0.019	-0.039	-0.002	0.025
0.020	-0.016	0.016	-0.029	0.012	-0.026	0.049	-0.004	0.016
0.025	-0.012	-0.036	-0.019	0.006	0.006	-0.033	0.015	0.000
-0.043	0.009	0.015	0.026	-0.042	0.014	0.008	0.001	-0.033
-0.021	0.031	-0.031	0.031	0.010	-0.014	0.007	-0.011	-0.004
-0.017	-0.003	-0.024	0.033	-0.036	0.028	0.013	0.000	-0.015
0.004	0.012	-0.014	0.009	0.005	0.012	-0.005	0.001	0.010

Urban	Cheerful	Gloomy	Individualistic	Conventional	Friendly	Unfriendly	Healed	Stimulated
0.002	-0.004	0.003	-0.005	0.001	-0.004	0.008	-0.006	0.009
-0.003	-0.006	0.005	-0.008	0.007	-0.008	0.005	-0.004	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
-0.002	-0.011	0.005	-0.013	0.008	-0.010	0.007	-0.008	0.004
0.001	0.000	0.000	0.000	-0.001	0.000	0.001	-0.001	0.001
-0.002	0.008	-0.005	0.007	-0.004	0.008	-0.006	0.008	-0.007
0.000	-0.005	0.002	-0.003	0.002	-0.004	0.004	-0.005	0.006
-0.002	0.013	-0.007	0.015	-0.009	0.011	-0.011	0.011	-0.010
0.006	-0.016	0.009	-0.014	0.008	-0.013	0.013	-0.016	0.016
-0.002	0.005	-0.003	0.007	-0.003	0.005	-0.004	0.005	-0.003
0.007	-0.009	0.006	-0.011	0.004	-0.006	0.007	-0.009	0.008
-0.001	-0.001	0.001	-0.003	0.002	-0.003	0.003	-0.001	0.002
0.000	0.000	0.000	-0.002	0.001	0.001	0.000	0.000	-0.003
0	0.006	-0.004	0.006	-0.004	0.006	-0.003	0.005	-0.003
1	-0.003	0.003	0.000	0.000	0.000	0.002	-0.004	0.006
-0.003	1	0	0.014	-0.008	0.011	-0.010	0.012	-0.010
0.004	0	1	-0.013	0.008	-0.009	0.011	-0.010	0.011
0.000	0.012	-0.008	1	0	0.012	-0.012	0.011	-0.008
0.000	-0.011	0.008	0	1	-0.012	0.011	-0.009	0.008
0.001	0.017	-0.011	0.023	-0.013	1	0	0.016	-0.013
0.001	-0.008	0.006	-0.011	0.006	0	1	-0.008	0.009
-0.005	0.012	-0.007	0.012	-0.007	0.010	-0.011	1	0
0.005	-0.007	0.005	-0.006	0.004	-0.006	0.008	0	1
0.000	0.009	-0.004	0.009	-0.006	0.008	-0.008	0.009	-0.008
-0.003	-0.008	0.005	-0.012	0.007	-0.010	0.010	-0.008	0.006
-0.001	0.005	-0.001	0.004	-0.003	0.003	-0.001	0.002	0.000
0.007	-0.003	0.003	-0.002	0.000	0.000	0.001	-0.003	0.004
-0.001	0.009	-0.006	0.011	-0.008	0.009	-0.008	0.008	-0.007
0.001	-0.005	0.003	-0.003	0.003	-0.005	0.004	-0.004	0.005
-0.005	0.015	-0.008	0.015	-0.009	0.012	-0.011	0.013	-0.012
0.004	-0.010	0.006	-0.012	0.006	-0.008	0.008	-0.009	0.008
-0.006	0.017	-0.011	0.018	-0.011	0.015	-0.016	0.017	-0.018
0.007	-0.005	0.005	-0.008	0.003	-0.005	0.009	-0.008	0.011
-0.001	0.012	-0.006	0.014	-0.007	0.011	-0.010	0.011	-0.008
0.003	-0.010	0.006	-0.012	0.006	-0.009	0.011	-0.011	0.011
-0.001	0.004	-0.002	0.005	-0.003	0.004	-0.003	0.003	-0.003
0.004	-0.011	0.005	-0.010	0.005	-0.009	0.009	-0.010	0.010
0.014	0.005	0.018	0.008	0.010	0.003	-0.004	0.000	0.007
-0.014	-0.005	-0.018	-0.008	-0.010	-0.003	0.004	0.000	-0.007
0.011	0.062	-0.040	0.094	-0.057	0.070	-0.065	0.052	-0.037
-0.027	0.031	0.002	-0.001	0.011	-0.003	0.007	0.025	-0.013
-0.014	-0.021	-0.004	-0.037	0.020	-0.004	-0.010	0.007	-0.042
-0.025	-0.011	0.002	-0.017	-0.002	-0.021	0.006	-0.011	-0.013
-0.001	-0.025	0.003	0.003	0.008	-0.020	0.011	-0.022	0.033
0.049	-0.027	0.026	-0.025	0.014	-0.016	0.023	-0.030	0.042
0.006	-0.009	0.011	-0.018	0.005	-0.007	0.028	-0.021	0.031

Open	Exclusive	Want to reside	Do not want to reside	Warm	Aloof	Fascinating	Not fascinating	Want to play
-0.005	0.006	0.003	0.001	0.001	0.000	-0.004	0.003	-0.009
-0.005	0.004	-0.005	0.000	-0.007	0.007	-0.010	0.003	-0.010
0.000	-0.001	0.000	0.000	-0.001	0.001	0.000	0.000	0.000
-0.008	0.005	-0.005	-0.001	-0.008	0.006	-0.012	0.006	-0.016
0.000	0.000	0.000	0.000	0.001	-0.001	0.000	0.000	0.000
0.006	-0.004	0.003	-0.003	0.004	-0.008	0.013	-0.004	0.013
-0.006	0.003	-0.001	-0.001	-0.003	0.004	-0.006	0.002	-0.010
0.011	-0.007	0.005	0.000	0.007	-0.006	0.015	-0.008	0.022
-0.012	0.007	-0.005	0.004	-0.007	0.010	-0.021	0.009	-0.027
0.003	-0.003	0.002	-0.003	0.001	-0.002	0.007	-0.003	0.007
-0.003	0.002	-0.002	0.006	-0.003	0.002	-0.012	0.007	-0.014
-0.002	0.003	0.000	0.000	0.000	0.001	-0.002	0.001	-0.003
0.002	-0.001	-0.001	0.001	0.000	-0.002	0.000	0.001	0.001
0.003	-0.002	0.004	-0.003	0.003	-0.005	0.010	-0.004	0.008
0.000	-0.002	-0.001	0.004	0.000	0.001	-0.004	0.002	-0.006
0.011	-0.006	0.005	-0.002	0.006	-0.006	0.016	-0.008	0.022
-0.006	0.006	-0.002	0.003	-0.005	0.005	-0.013	0.006	-0.019
0.009	-0.008	0.004	-0.001	0.006	-0.004	0.014	-0.008	0.019
-0.008	0.008	-0.004	0.000	-0.007	0.006	-0.014	0.007	-0.020
0.015	-0.013	0.006	0.000	0.009	-0.010	0.022	-0.010	0.030

-0.007	0.006	-0.001	0.001	-0.004	0.004	-0.009	0.005	-0.015
0.010	-0.006	0.003	-0.002	0.005	-0.006	0.015	-0.007	0.021
-0.006	0.003	0.000	0.002	-0.003	0.005	-0.009	0.004	-0.015
1	0	0.003	0.001	0.004	-0.005	0.011	-0.005	0.016
0	1	-0.002	-0.001	-0.004	0.004	-0.010	0.005	-0.014
0.003	-0.001	1	0	0.002	-0.003	0.006	-0.003	0.005
0.002	-0.002	0	1	0.000	0.001	-0.005	0.003	-0.004
0.007	-0.004	0.003	0.000	1	0	0.012	-0.005	0.018
-0.004	0.002	-0.002	0.001	0	1	-0.007	0.002	-0.009
0.010	-0.007	0.006	-0.003	0.007	-0.008	1	0	0.024
-0.007	0.005	-0.004	0.003	-0.004	0.004	0	1	-0.017
0.014	-0.009	0.004	-0.002	0.009	-0.009	0.021	-0.010	1
-0.003	0.005	0.001	0.004	0.000	0.000	-0.007	0.005	0
0.010	-0.008	0.004	-0.001	0.004	-0.005	0.014	-0.007	0.018
-0.009	0.007	-0.001	0.001	-0.002	0.003	-0.011	0.006	-0.018
0.003	-0.003	0.002	-0.001	0.001	-0.002	0.004	-0.002	0.006
-0.009	0.006	-0.004	0.002	-0.002	0.005	-0.013	0.006	-0.017
0.018	-0.025	0.001	0.014	-0.034	0.029	-0.015	-0.003	-0.016
-0.018	0.025	-0.001	-0.014	0.034	-0.029	0.015	0.003	0.016
0.052	-0.050	0.023	0.002	0.037	-0.031	0.076	-0.037	0.103
0.015	0.016	0.016	-0.016	0.000	-0.004	0.030	-0.015	0.025
-0.004	-0.004	-0.029	-0.008	-0.013	-0.017	-0.007	0.015	0.002
-0.006	0.016	-0.006	0.007	0.003	0.012	-0.024	0.003	0.010
-0.041	0.011	-0.013	-0.014	-0.016	0.034	-0.030	0.005	-0.054
-0.004	0.003	-0.013	0.032	-0.006	0.015	-0.043	0.024	-0.052
-0.013	0.008	0.022	-0.003	-0.005	-0.008	-0.002	0.006	-0.034

Want to examine deliberately	Lively	Calm	Atmosphere of urban	Atmosphere of rural area
0.012	-0.009	0.006	-0.006	0.004
-0.005	-0.007	0.000	-0.005	0.000
-0.001	0.001	-0.001	0.001	-0.001
-0.005	-0.011	0.002	-0.003	0.002
0.003	-0.002	0.001	-0.002	0.001
-0.002	0.010	-0.003	0.004	-0.003
0.001	-0.006	0.003	-0.001	0.002
-0.005	0.016	-0.006	0.012	-0.005
0.008	-0.020	0.007	-0.011	0.006
-0.005	0.008	-0.003	0.006	-0.002
0.008	-0.012	0.005	-0.003	0.003
0.003	-0.003	0.001	-0.006	0.001
-0.001	0.000	0.000	0.002	-0.001
0.000	0.009	-0.001	0.003	-0.001
0.005	-0.002	0.001	-0.003	0.002
-0.005	0.018	-0.006	0.011	-0.005
0.008	-0.011	0.005	-0.009	0.004
-0.007	0.018	-0.006	0.012	-0.004
0.005	-0.013	0.005	-0.013	0.004
-0.008	0.024	-0.008	0.017	-0.007
0.007	-0.011	0.005	-0.008	0.003
-0.007	0.016	-0.006	0.008	-0.005
0.007	-0.008	0.004	-0.005	0.003
-0.003	0.012	-0.005	0.007	-0.004
0.006	-0.013	0.006	-0.011	0.004
0.001	0.005	-0.001	0.005	-0.002
0.005	-0.003	0.001	-0.003	0.001
0.000	0.008	-0.002	0.005	-0.002
0.000	-0.004	0.001	-0.004	0.002
-0.006	0.018	-0.006	0.012	-0.005
0.006	-0.013	0.005	-0.009	0.004
0	0.020	-0.008	0.013	-0.007
1	-0.010	0.007	-0.012	0.005
-0.008	1	0	0.012	-0.005
0.011	0	1	-0.011	0.005
-0.004	0.006	-0.002	1	0
0.010	-0.016	0.007	0	1
-0.050	0.052	-0.029	0.061	-0.022
0.050	-0.052	0.029	-0.061	0.022
-0.022	0.088	-0.028	0.069	-0.021
0.005	0.032	-0.008	-0.033	-0.008
-0.034	-0.013	-0.006	-0.001	-0.003
-0.004	-0.043	0.006	0.009	0.001
-0.015	-0.019	0.006	-0.018	0.011
0.048	-0.032	0.016	-0.049	0.017
0.022	-0.013	0.015	0.023	0.003

Gender		Age						
Male	Female	10th	20th	30th	40th	50th	60th	More than70
-0.038	0.036	-0.036	0.006	-0.056	0.020	0.001	0.051	0.119
0.038	-0.036	-0.095	0.018	0.023	0.039	0.055	-0.008	-0.066
0.012	-0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.027	-0.025	-0.119	-0.030	0.061	0.025	0.056	-0.022	0.020
-0.017	0.017	0.007	-0.011	-0.002	-0.009	-0.006	0.017	0.021
-0.021	0.020	0.064	0.045	0.036	-0.082	-0.058	-0.053	0.019
0.000	0.000	-0.035	-0.030	-0.015	0.014	0.073	-0.008	0.047
0.004	-0.004	0.124	0.029	-0.044	0.024	-0.073	-0.060	-0.053
0.008	-0.008	-0.119	-0.073	-0.032	0.056	0.099	0.120	0.049
0.003	-0.002	0.049	0.015	0.005	-0.042	0.016	-0.061	0.011
0.010	-0.009	-0.055	-0.083	0.013	0.037	-0.059	0.126	0.076
-0.012	0.011	-0.031	0.043	-0.019	0.006	0.008	0.016	-0.009
0.006	-0.006	-0.006	-0.017	0.039	0.002	-0.055	0.000	0.011
-0.020	0.019	0.055	0.038	0.000	-0.066	-0.011	-0.049	0.048
0.007	-0.007	0.016	-0.043	-0.015	-0.033	-0.001	0.110	0.021
0.003	-0.003	0.113	0.063	-0.028	-0.018	-0.064	-0.076	-0.038
0.015	-0.014	-0.101	0.005	-0.007	0.005	0.012	0.102	0.061
0.004	-0.004	0.147	-0.001	-0.041	-0.025	0.006	-0.060	-0.062
0.008	-0.008	-0.142	0.031	0.037	-0.005	0.029	0.055	0.028
0.003	-0.002	0.203	-0.011	-0.008	-0.055	-0.082	-0.069	-0.043
-0.002	0.002	-0.088	0.011	-0.010	0.007	0.021	0.048	0.085
0.000	0.000	0.095	0.050	0.009	-0.018	-0.057	-0.085	-0.086
0.003	-0.003	-0.045	-0.018	-0.037	-0.015	0.056	0.079	0.086
0.010	-0.010	0.085	0.027	-0.005	-0.009	-0.092	-0.009	-0.048
-0.019	0.018	-0.117	0.041	-0.008	0.035	0.034	0.012	0.043

0.001	-0.001	0.036	0.026	-0.033	-0.009	-0.027	-0.031	0.077
0.012	-0.011	0.006	-0.043	-0.015	0.016	-0.048	0.120	-0.016
-0.031	0.030	0.102	0.000	-0.025	0.007	-0.062	-0.024	-0.034
0.013	-0.012	-0.042	-0.005	-0.017	0.014	0.063	0.030	-0.025
-0.008	0.008	0.124	0.053	-0.008	-0.036	-0.067	-0.108	-0.009
-0.003	0.003	-0.088	-0.038	0.025	0.007	0.016	0.086	0.031
-0.007	0.007	0.148	0.040	0.002	0.014	-0.108	-0.114	-0.112
-0.033	0.031	-0.043	0.011	-0.048	-0.008	-0.041	0.144	0.098
0.022	-0.021	0.113	0.045	-0.012	-0.051	-0.035	-0.063	-0.039
-0.031	0.030	-0.088	-0.029	-0.014	0.018	0.025	0.078	0.104
0.013	-0.012	0.044	-0.023	-0.001	0.005	-0.016	-0.048	0.033
-0.028	0.027	-0.079	-0.035	-0.009	0.005	0.058	0.103	0.023
1	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	1	0	0	0	0	0	0
0.000	0.000	0	1	0	0	0	0	0
0.000	0.000	0	0	1	0	0	0	0
0.000	0.000	0	0	0	1	0	0	0
0.000	0.000	0	0	0	0	1	0	0
0.000	0.000	0	0	0	0	0	1	0
0.000	0.000	0	0	0	0	0	0	1