An Analysis of the Questionnaire Investigation for Using IC Card on Purchasin

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ABSTRACT

Electronic money usage is widespread at present such as IC traffic cards on the railroad. In addition to the railroads, places such as convenience stores, supermarkets, and restaurants, payment by electronic money has become possible in Japan.

Use in the traffic system and convenience stores has become popular mainly in the prepaid type IC cards such as Suica and Edy from 2001. After that, 2 major groups of the retailing business newly issued the group cards such as nanaco and WAON in April 2007.

This paper analyzes the thought of consumers for about the IC cards, which has a big influence on the buying behavior of consumers.

For this purpose, we created a questionnaire survey of using IC card on purchasing. We utilized the text mining method such as Key Graph. Reviewing past researches, there are some related researches. But analyses were based on simple accumulation such as common questionnaires. There have been a few investigations on this.

The purpose of this survey is to examine the thought of consumers about the convenience and the need of the purchasing with IC card. In addition, this survey seeks to clarify the general opinions of consumers concerning IC card systems. Moreover, this survey strives to learn about consumers' awareness of IC card systems, their expectations for IC card systems, the information they need.

Some interesting and instructive results were obtained. These are utilized for constructing a much more effective and useful IC card system which should be popularized by consumers.

Key Words: electronic money, IC card, prepaid type, post-paid type, point program

1. INTRODUCTION

Electronic money usage is widespread at the present time such as IC traffic cards on the railroad. In addition to the usage for railroads, payment by electronic money has become possible in such places as convenience stores, supermarkets and restaurants.

There are two types of electronic money. They are categorized by payment methods. One type is the prepaid type which is centered around JR East's Suica, private railways' PASMO in the metropolitan area, and Edy, which bitWallet issues. Another is the post-paid type. There are some electronic money such as iD, QUICPay and Smartplus which are connected to the credit card mainly in the cell phone wallets, and private railways' PiTaPa in the Kansai area.

Use in the traffic system and convenience stores has become popular mainly in the prepaid type IC cards such as Suica and Edy from 2001. After that, 2 major groups of the retailing business newly issued the group cards such as nanaco and WAON in April 2007. They made the enriched card of the point program, and became popular for the payment inside the convenience store and supermarket. As a result, nanaco of the seven & eye Holdings jumped out to the top, at the number of the purchase payments within only 2 months after being launched in June, 2007. As the rapid popularization of the IC card being promoted, the competition among companies for getting new customers became hard.

This paper analyzes how electronic money is introduced into the market at present under the rapid popularization of using IC cards, which has a big influence on the buying behavior of consumers and how they will become popular in the future. While taking into consideration the advantages and the disadvantages of various kinds of electronic money, the development of electronic money using IC cards in the future is discussed.

The purpose of this survey is to examine the thought of consumers for about the convenience and the need in purchasing with IC card. In addion, this survey seeks to clarify the general opinions of consumers concerning IC card systems. Moreover, this survey strives to learn about consumers' awareness of IC card systems, their expectations for IC card systems, the information they need.

The rest of the paper is organized as follows. The outline of the questionnaire research is stated in section 2. The outline of the examinees is stated in section 3. In section 4, analysis is executed. In section 5, remarks are made regarding the results of

the analysis, and section 6 is a summary.

2. OUTLINE OF THE QUESTIONNAIRE RESEARCH

We make a questionnaire investigation for using IC card on purchasing. The outline of questionnaire research is as follows.

(1) Scope of investigation : Young Person, Japan

(2) Period   : October 2007~January 2008

(3) Method   : Mail and self writing

(4) Collection   : Number of distribution 600,
                                         Number of collection 259
                                         (collection rate 43.2%)

3. OUTLINE OF THE EXAMINEES

Outline of the examinees is as follows.
①Sex (Q18)
   ● Male   : 81%
   ● Female   : 19%
②Age (Q18)
   ● 18~22   : 33%
   ● 23~29   : 16%
   ● 30~39   : 28%
   ● 40~49   : 15%
   ● 50~59   : 8 %
③Address (Q18)
   ● Ibaraki   : 0 %
   ● Gunma   : 0 %
   ● Saitama   : 3 %
   ● Chiba   : 0 %
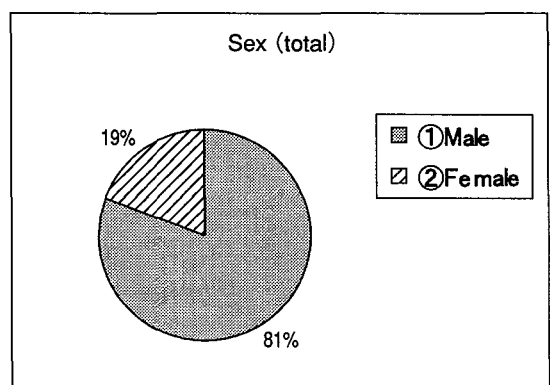
Fig. 3.1. Outline of the examinees (sex)

● Tokyo   : 9 %

● Kanagawa   : 10%

● Mie   : 0 %

● Shiga   : 0 %

● Kyoto   : 4 %

● Osaka   : 49%

● Hyogo   : 18%

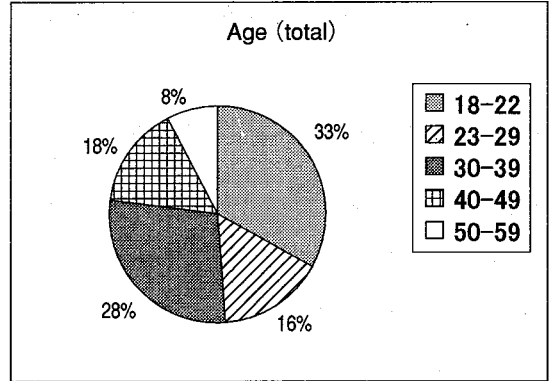● Nara   : 5 %

● Wakayama   : 2 %

● Yamaguchi   : 0 %

Age (total)

8%
18%
33%
28%
16%

18–22
23–29
30–39
40–49
50–59

Fig. 3.2. Outline of the examinees (age)

Address (total)

Ibaraki	1	
Saitama	1	8
Tokyo	1	21
	23	
Mie	1	1
Kyoto	9	
Hyogo	114	41
Wakayama	13	4
	1	
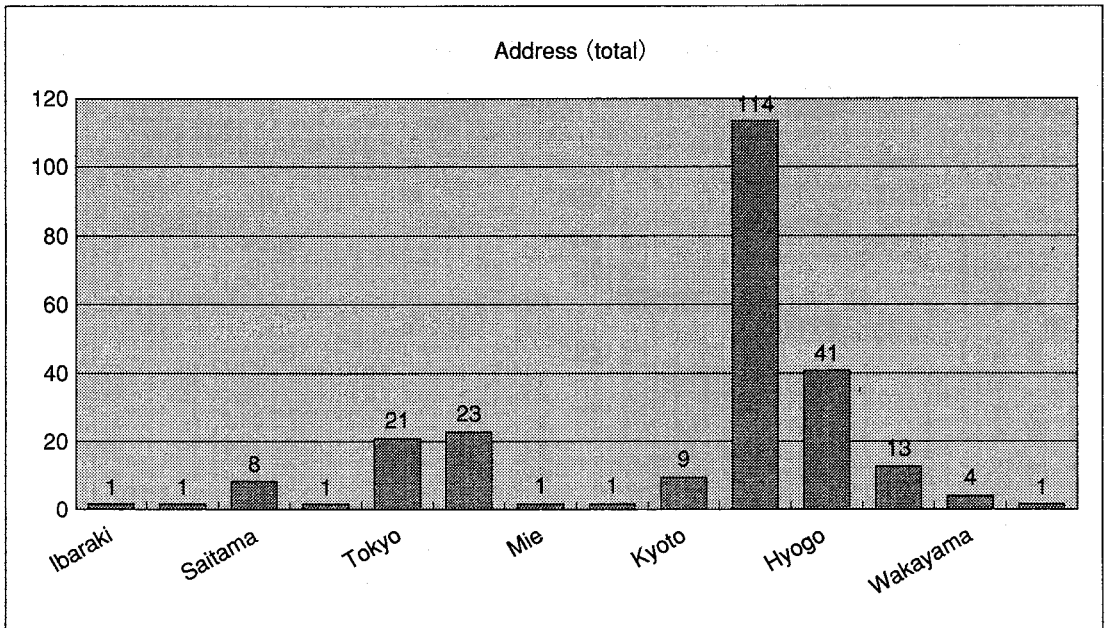
Fig. 3.3. Outline of the examinees (address)

4. ANALYSIS OF QUESTIONNAIRE RESULTS

Questionnaire results are analyzed using three methods. First, summary by single variable is explained in 4.1. Second, Analysis by Key Graph is used in 4.2. Third, analysis by Correspondence is used in 4.3.

4.1 Summary by single Variable

① Q1 : What kind of electronic money do you have?

ICOCA is the most one users have, which is followed by Edy、Suica、PiTaPa and PASMO. On the contrary, smartplus and QUICpay have only several percents share. Cards of payment for traffic are prevailing. In Kasai area, ICOCA and PiTaPa are prevailing and in Kanto area, Suica and PASMO are prevailing. Edy has relatively a big share in both areas.
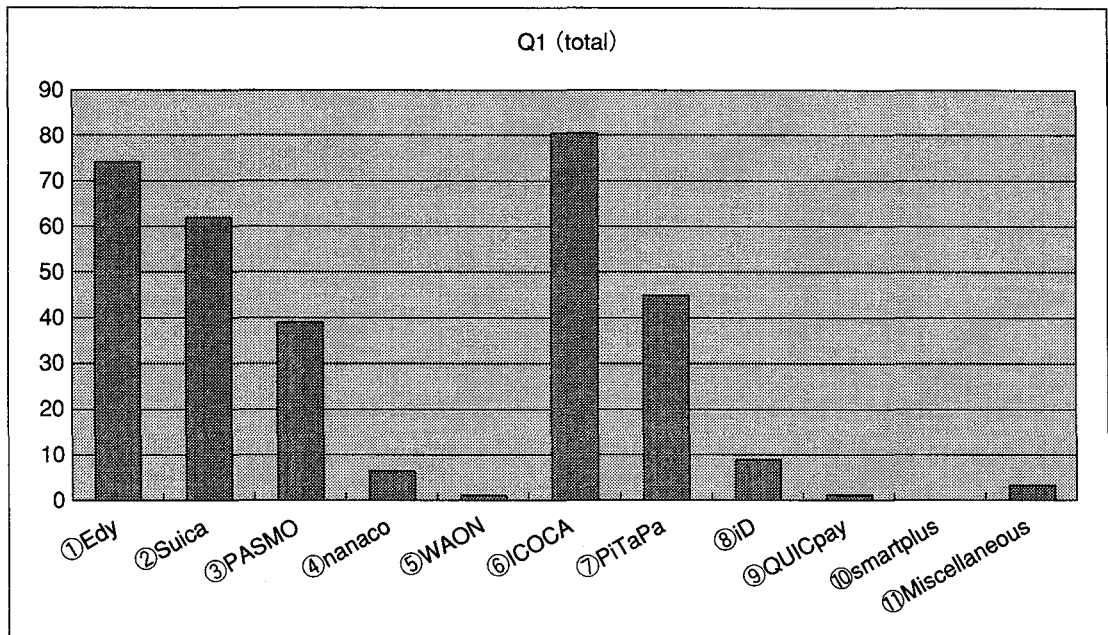
Fig. 4. 1. What kind of electric money do you have?
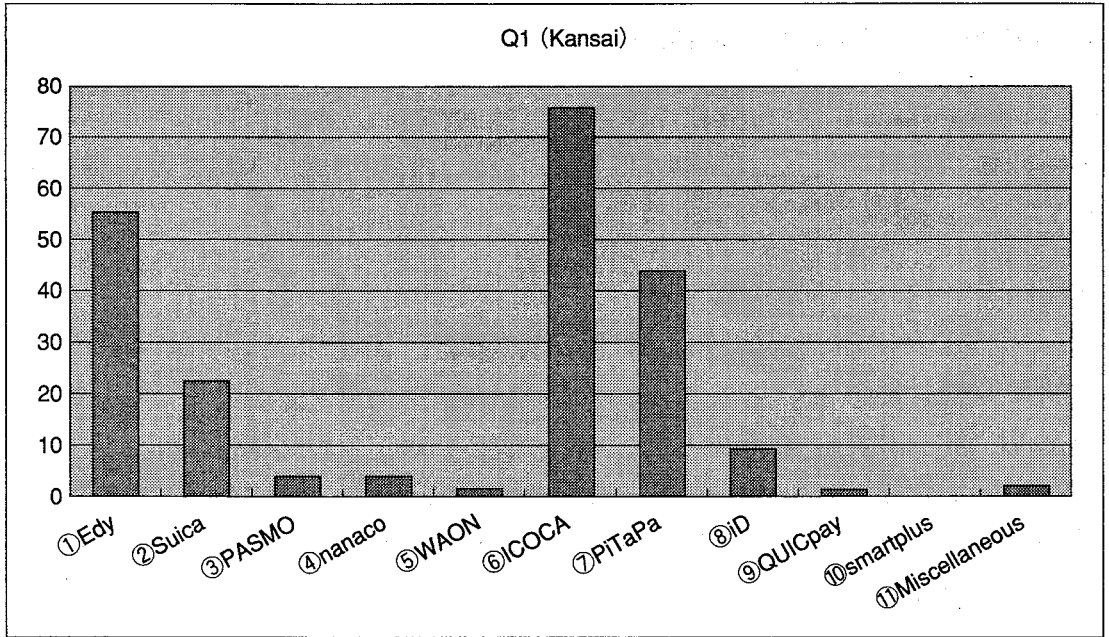
Q1 (Kansai)

Fig. 4.2. What kind of electric money do you have (Kansai)?

Q1 (Kanto)
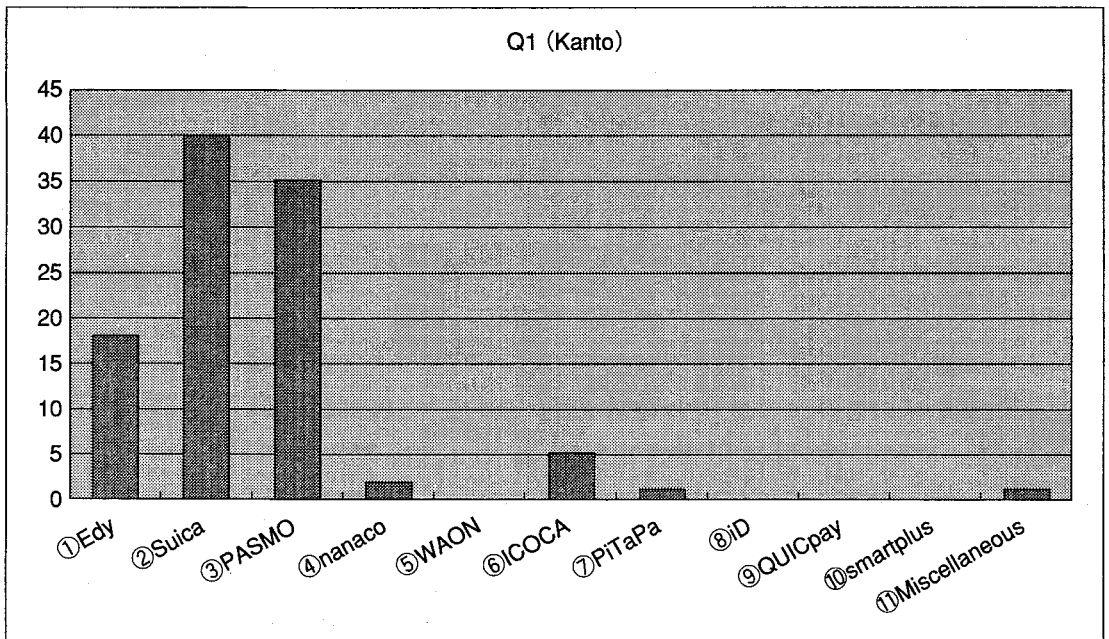
Fig. 4.3. What kind of electric money do you have (Kanto)?

② Q2：What kind of electronic money do you use?

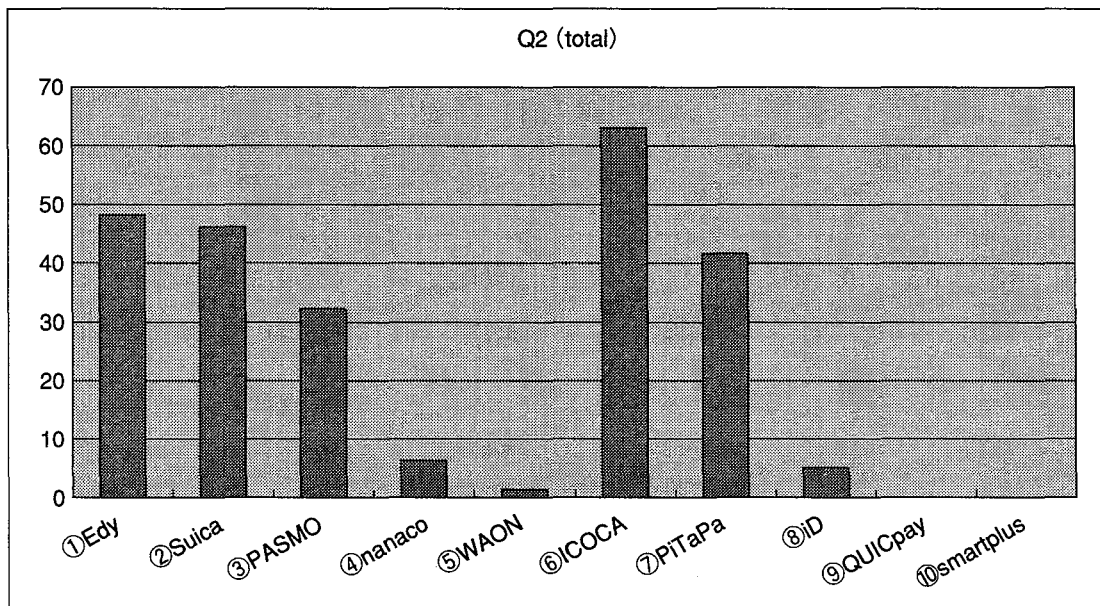The tendency is similar to the result of Q1. Edy is slightly decreasing compared with Q1 (Fig. 4.1.).
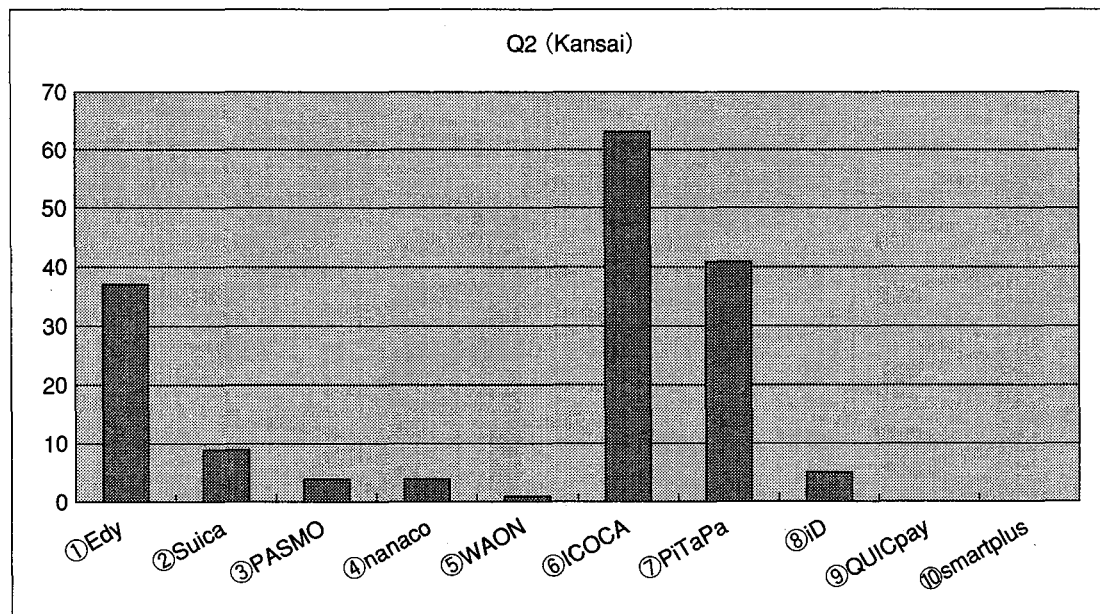

Fig. 4.4. What kind of electric money do you use?

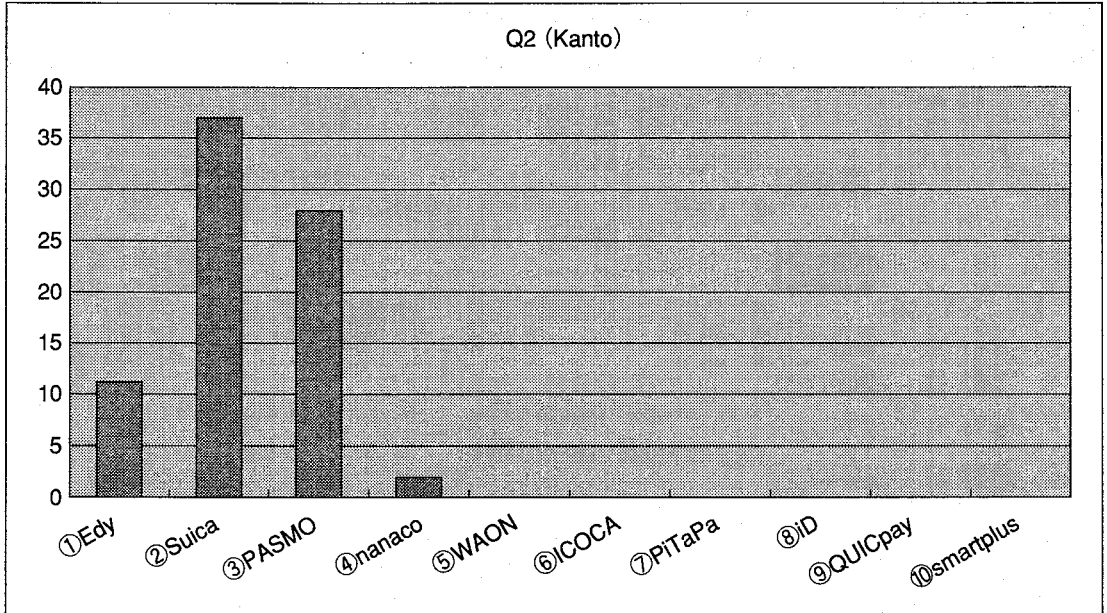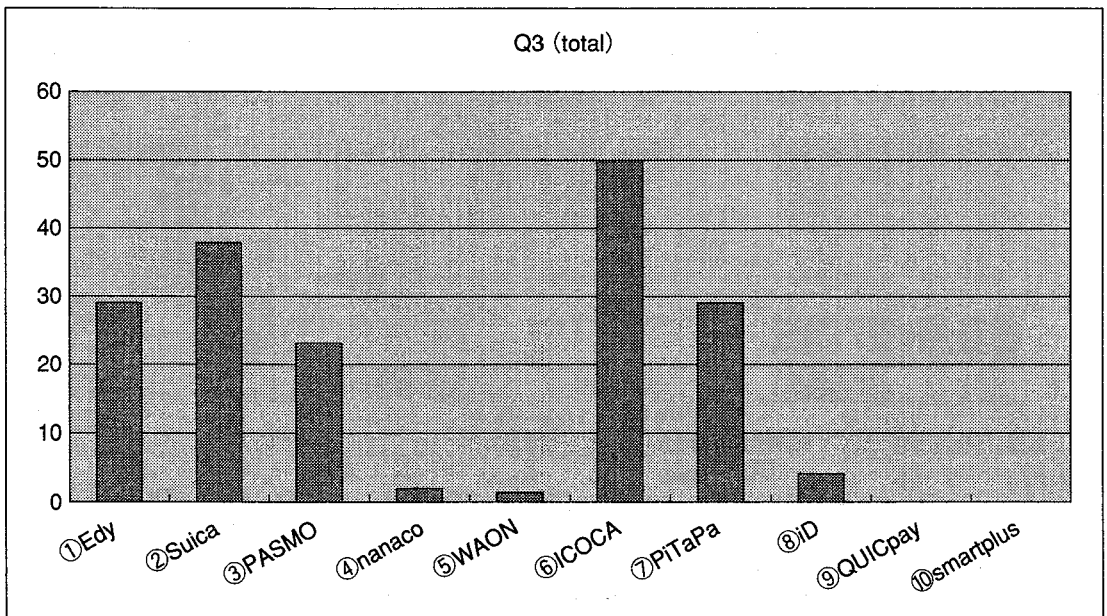Fig. 4.5. What kind of electric money do you use (Kansai) ?

Fig. 4.6. What kind of electric money do you use（Kanto）?

③ Q3 : What kind of electronic money do you use the most?

The tendency is also similar to the result of Q1 and Q2. Comparing the result of Q1 and Q2, Edy is not so used in Kansai area in spite of the condition that card holding rate is rather high.

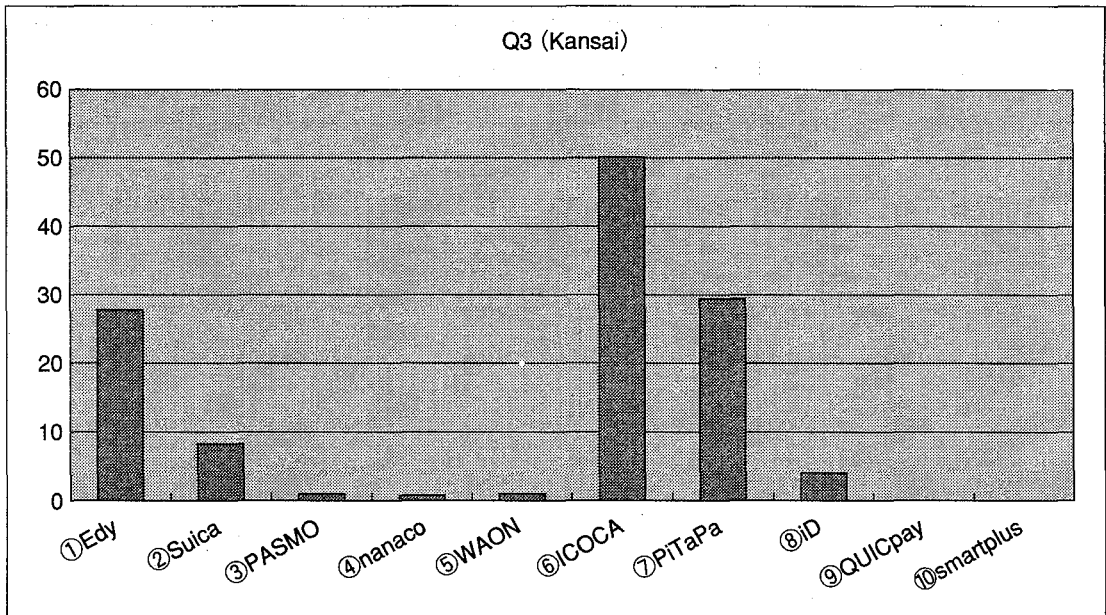Fig. 4.7. What kind of electric money do you use the most?

Fig. 4.8. What kind of electric money do you use the most (Kansai) ?
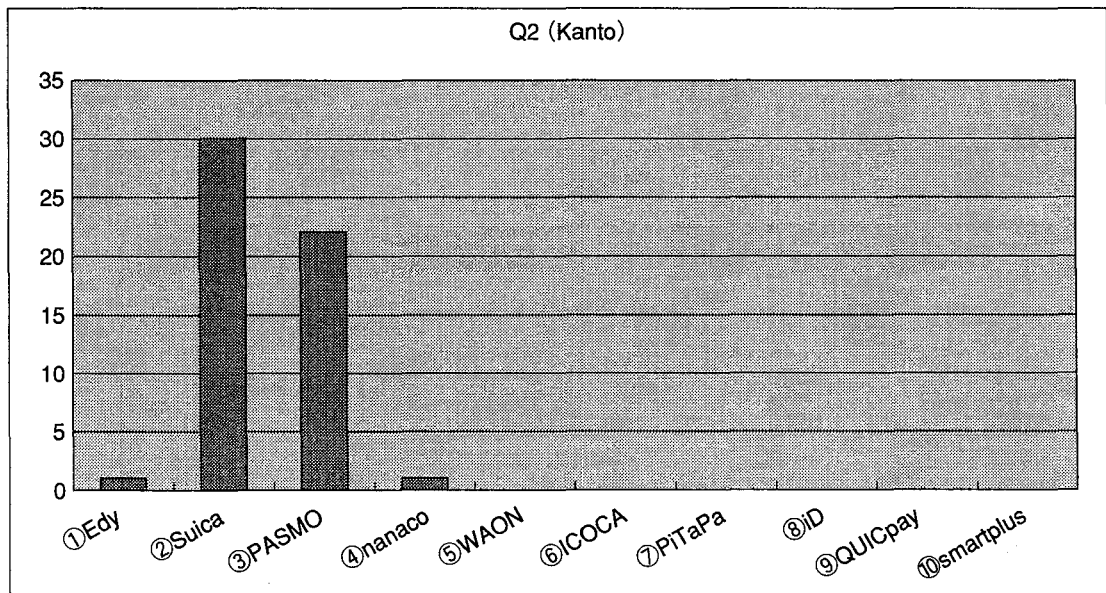

Fig. 4.9. What kind of electric money do you use the most (Kanto) ?

④ Q4 : Why is that?

"Able to use as a ticket for a railway and /or bus" and "Able to settle payment without having change" are dominant. Comparing Kansai area with Kanto area, the former one selects "Because it is a post-paid style" and "Charging money is troublesome" much

more than the latter one. It may be because PiTaPa, which is well used in Kansai area, is "Post-paid style and is also the style that charging money is not required".
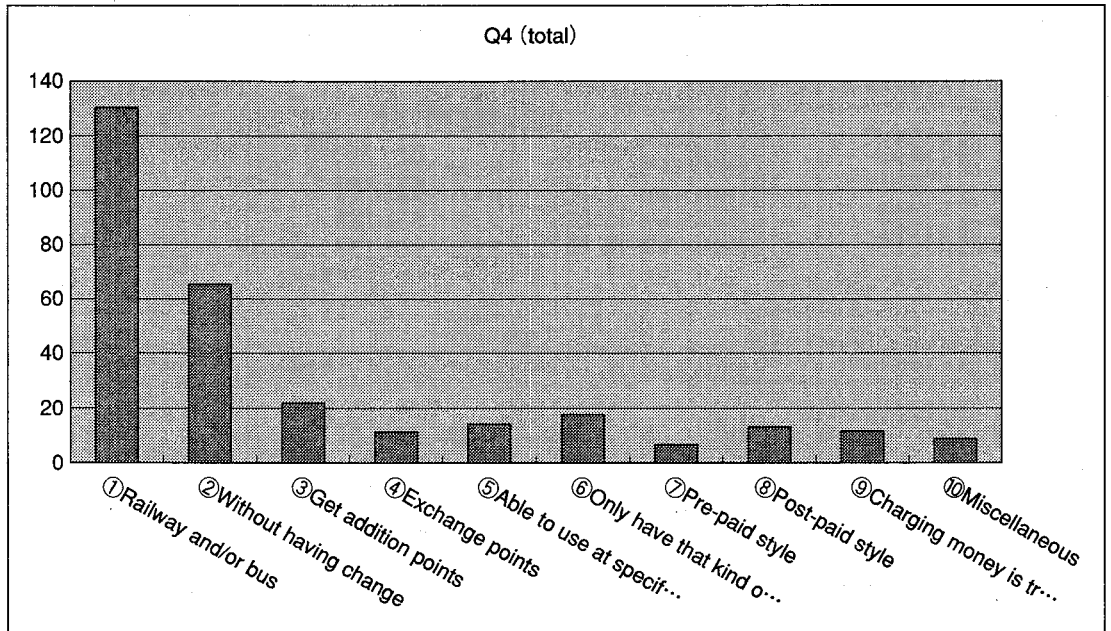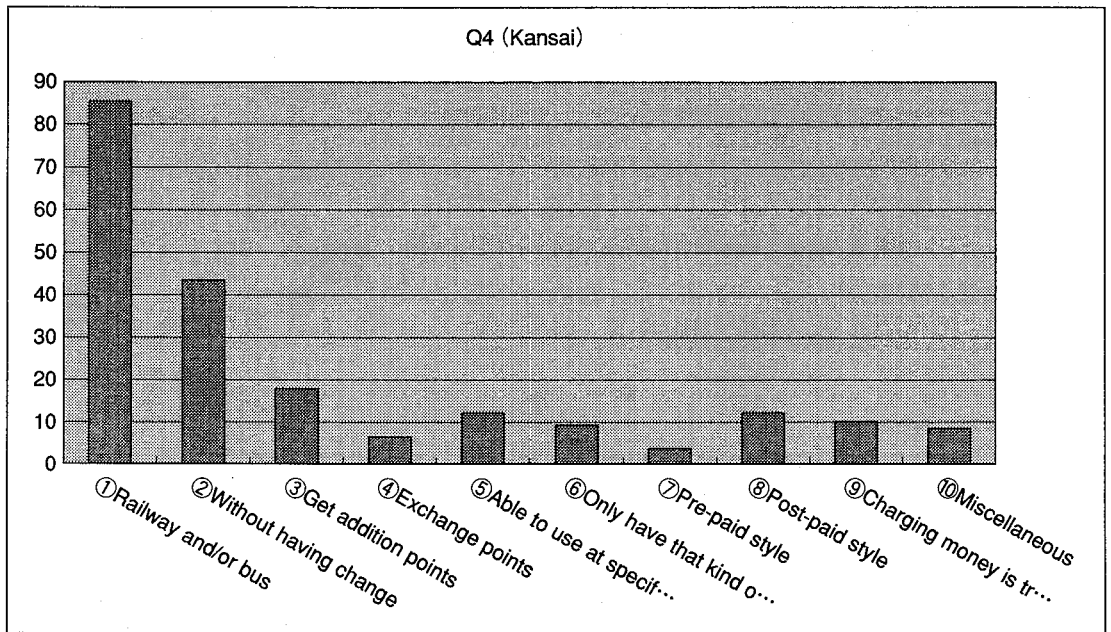
Fig. 4.10. Why is that (Q4) ?

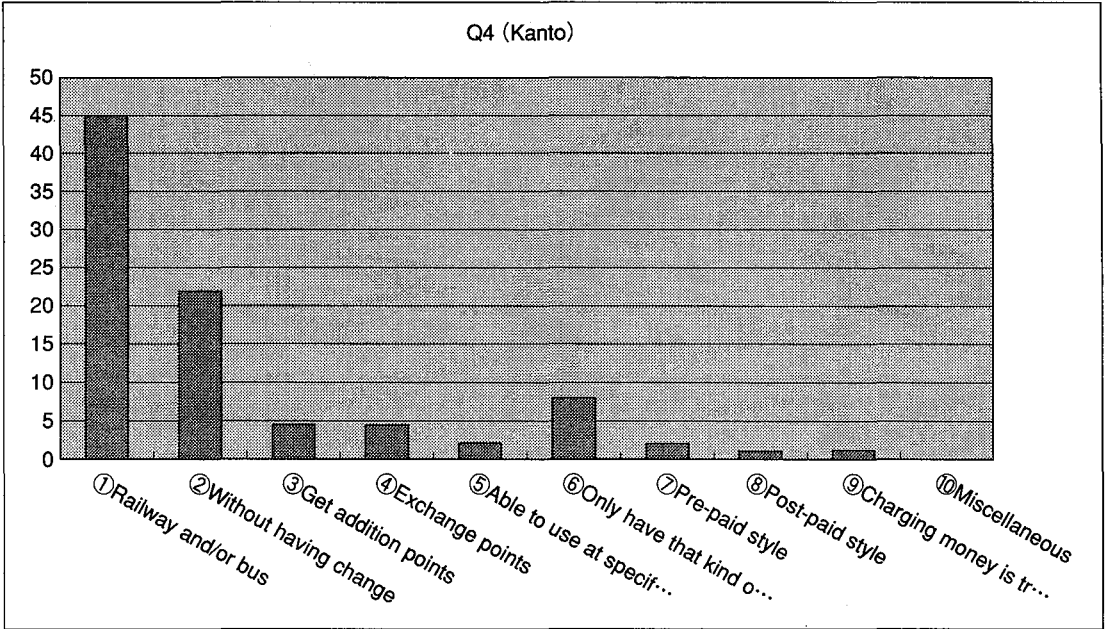Fig. 4.11. Why is that (Q4: Kansai) ?

Fig. 4.12. Why is that (Q4 : Kanto) ?

⑤ Q5 : What kind of method do you most often use when riding on a railway?

Pre-paid style (about 80%) is dominant. ICOCA (about 40%) is the most among them.
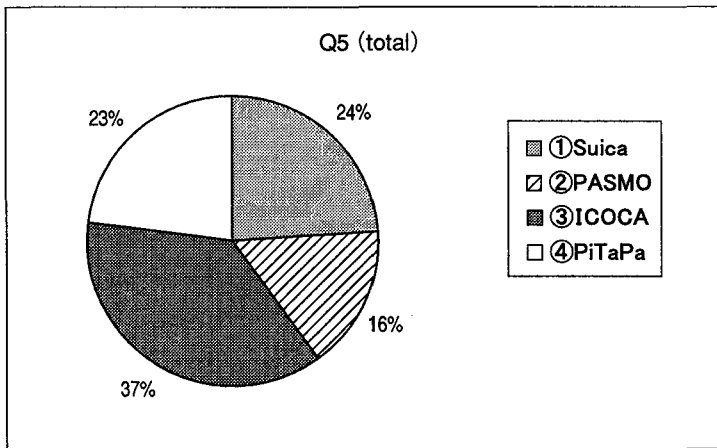

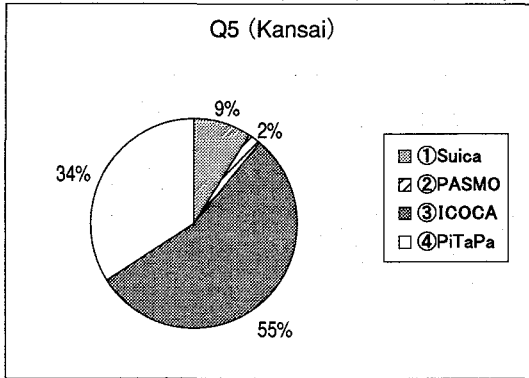Fig. 4.13. What kind of method do you most often use?

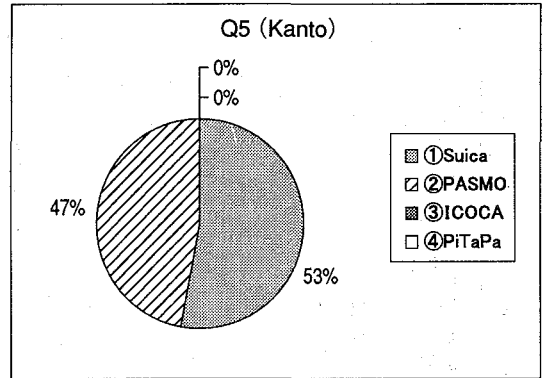Fig. 4.14. What kind of method do you most often
use (Kansai) ?

Fig. 4.15. What kind of method do you most often
use (Kanto) ?

⑥ Q6 : Why is that?

"Able to use as a ticket for a railway and /or bus" "Able to use when riding on the railway" and "Able to settle payments without having change" are dominant items.
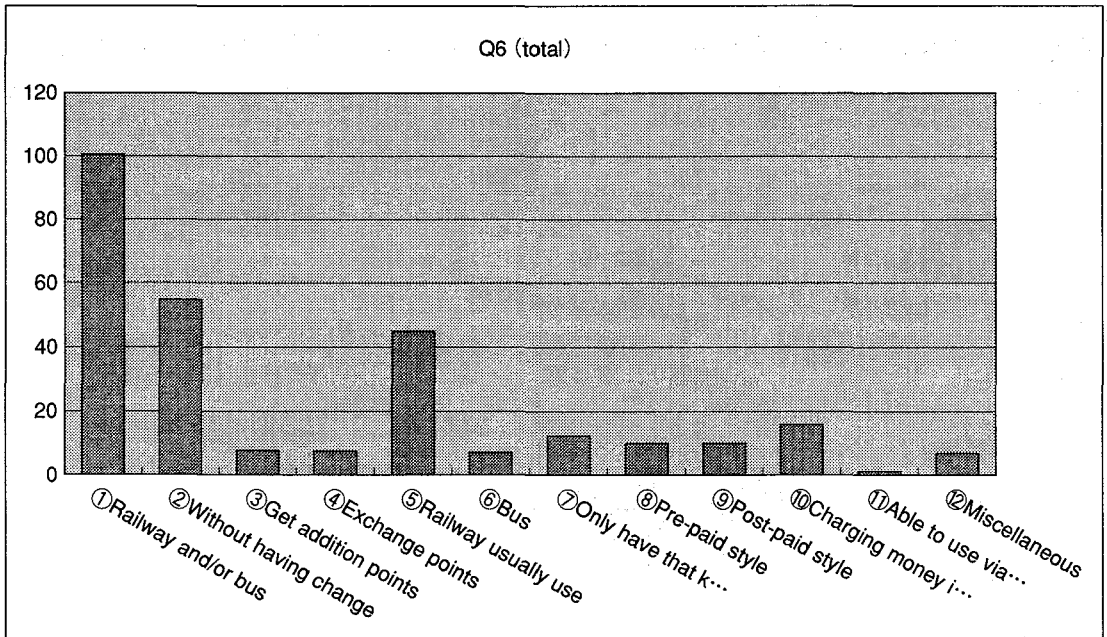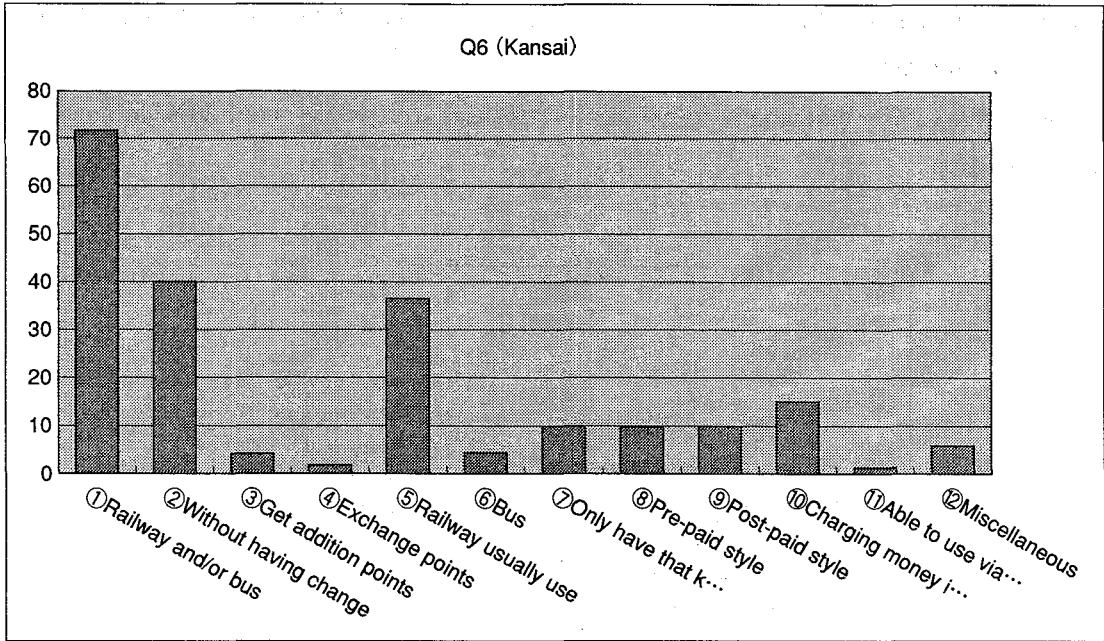

Fig. 4.16. Why is that (Q6) ?

Fig. 4.17. Why is that（Q6：Kansai）?
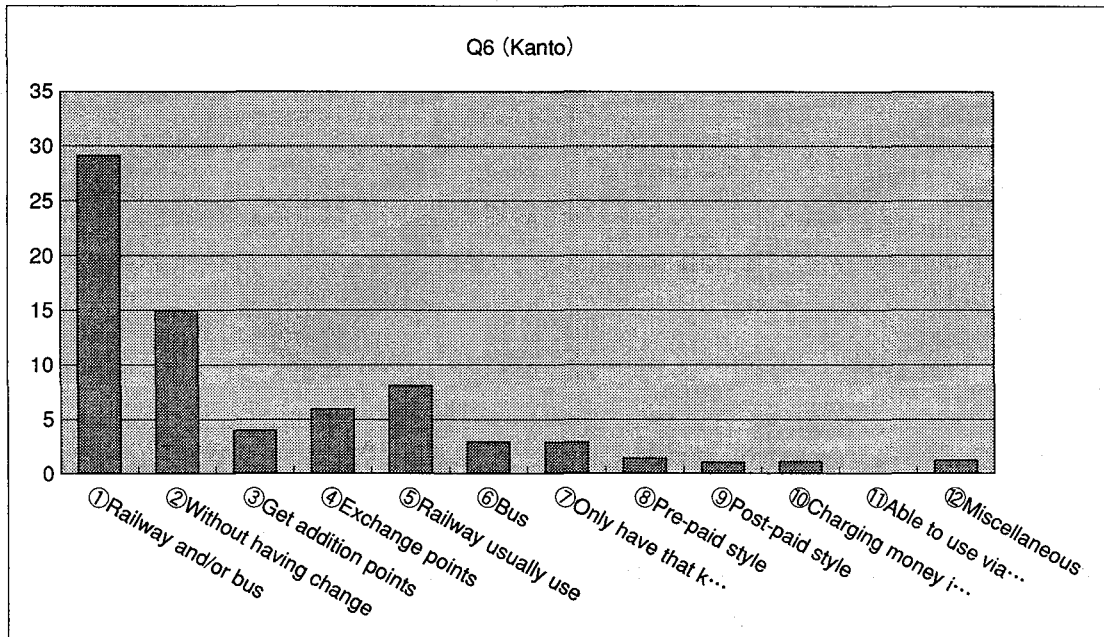

Fig. 4.18. Why is that（Q6：Kansai）?

⑦Q7：Do you know the electronic money nanaco, released by Seven & I holding in spring, 2007?

As for nanaco, 50% examinees do not know in kansai area, while about 30% do not know in Kanto area.

Q7 (total)

9%

14%

31%

■ ①Do not know it
☑ ②Slightly not sure
▨ ③Ordinary level
⊞ ④Slightly know it
□ ⑤Know it very well

30%

16%
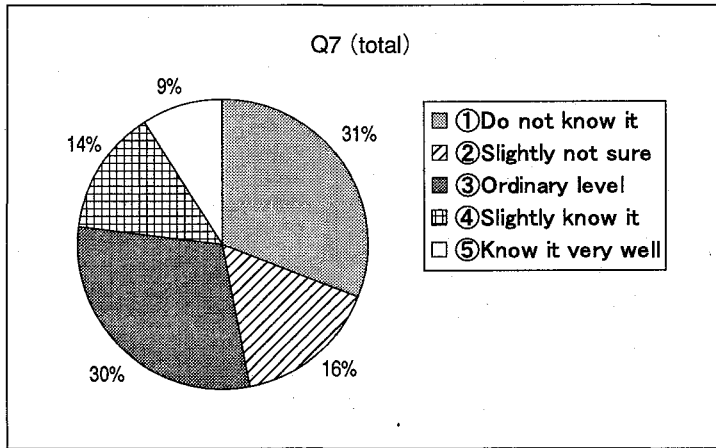
Fig. 4.19. Do you know nanaco?

Q7 (Kansai)

8%

14%

34%

■ ①Do not know it
☑ ②Slightly not sure
▨ ③Ordinary level
⊞ ④Slightly know it
□ ⑤Know it very well

26%

18%
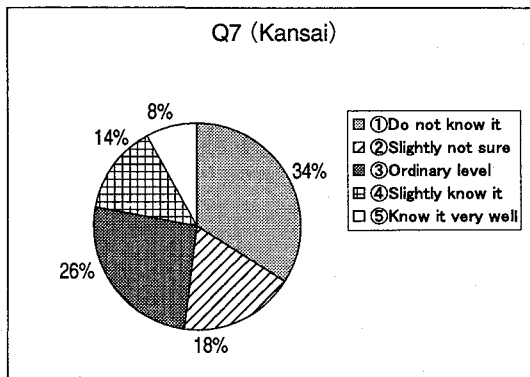
Fig. 4.20. Do you know nanaco (Kansai) ?

Q7 (Kanto)

15%

18%

■ ①Do not know it
☑ ②Slightly not sure
▨ ③Ordinary level
⊞ ④Slightly know it
□ ⑤Know it very well

13%

9%

45%

Fig. 4.21. Do you know nanaco (Kanto) ?

⑧ Q8：Do you want to use the electric money nanaco?

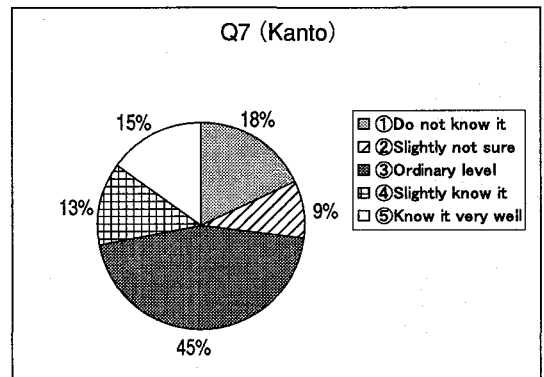About 70% examinees do not want to use nanaco in both areas.

Fig. 4.22. Do you want to use nanaco?

Fig. 4.22. Do you want to use nanaco (Kansai) ?
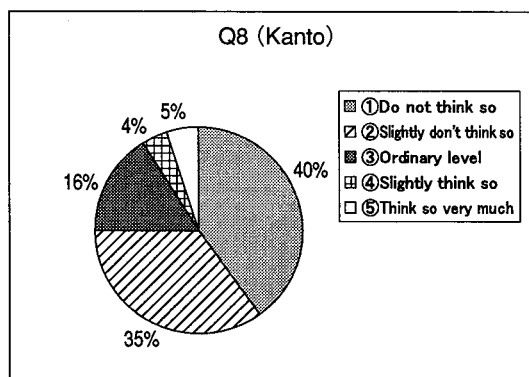
Fig. 4.22. Do you want to use nanaco (Kanto) ?

⑨ Q9：Why is that?

The answer "Able to use at convenience store" was slightly much more for who answered "want to use it" in Q8. Those who selected "Able to get additional points" in Kansai area were more than those of Kanto area. It may be because they can get additional points by using PiTaPa.
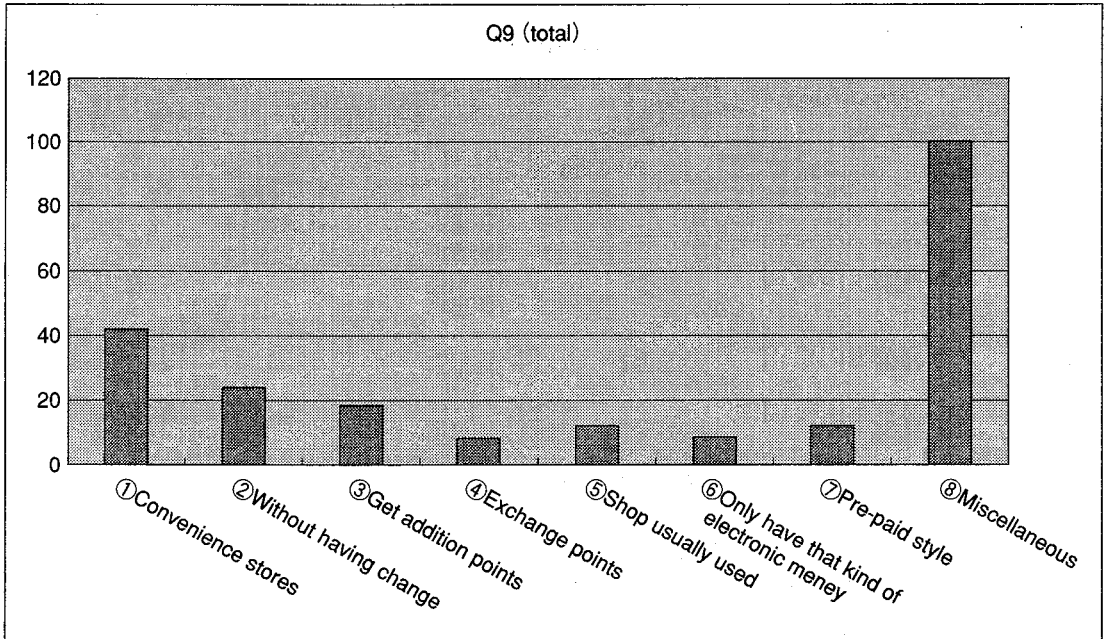
Fig. 4.23．Why is that（Q9）?
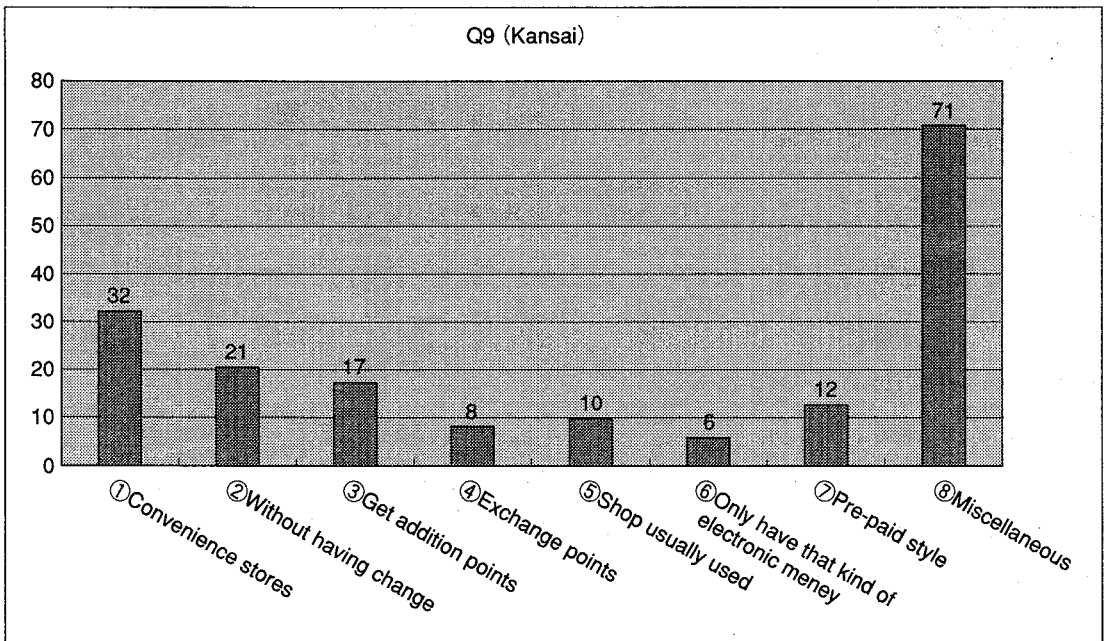
Fig. 4.24．Why is that（Q9：Kansai）?

⑩ **Q10：Do you know the electronic money WAON released by ION Co. Ltd., in spring, 2007?**
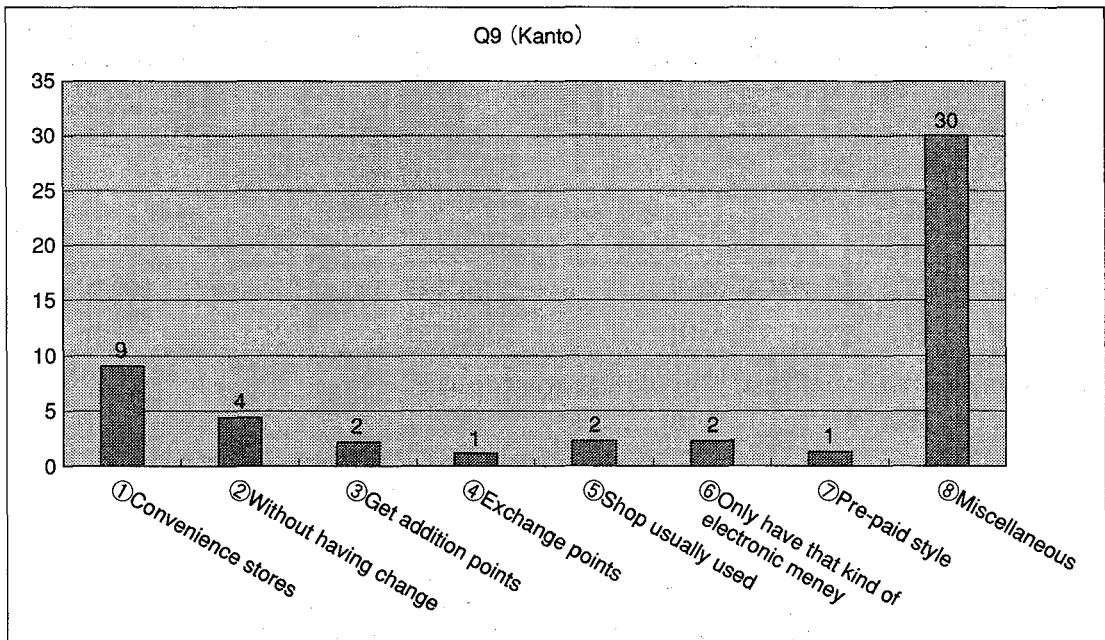
Fig. 4.25. Why is that（Q9：Kanto）?

About 65% examinees answered that they do not know it.

⑪ **Q11：Do you want to use the electronic money WAON?**
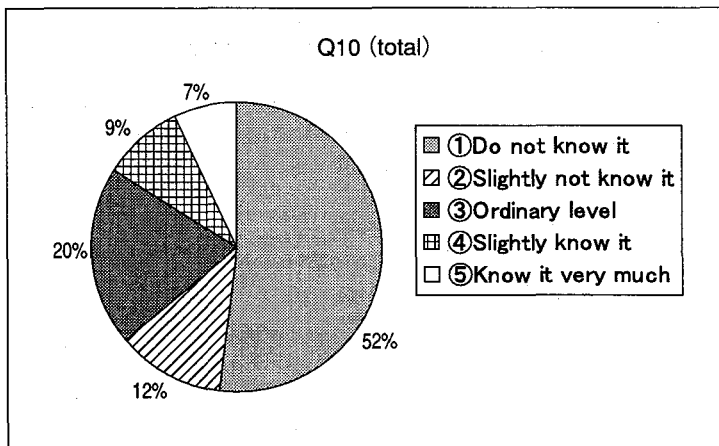
Fig. 4.26. Do you know WAON?
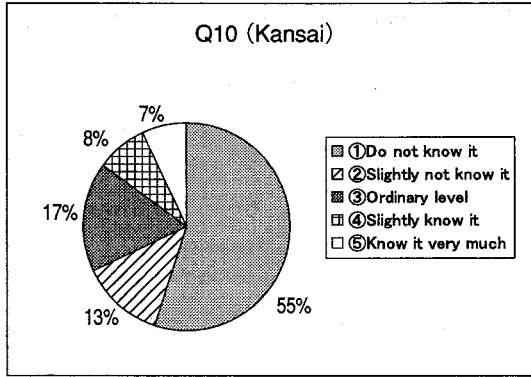
Fig. 4.27. Do you know WAON (Kansai) ?　　　　Fig. 4.28. Do you know WAON (Kanto) ?
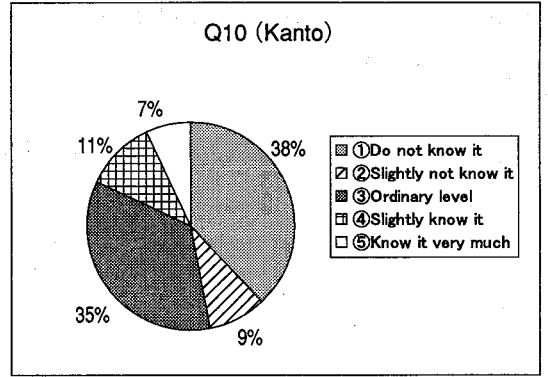
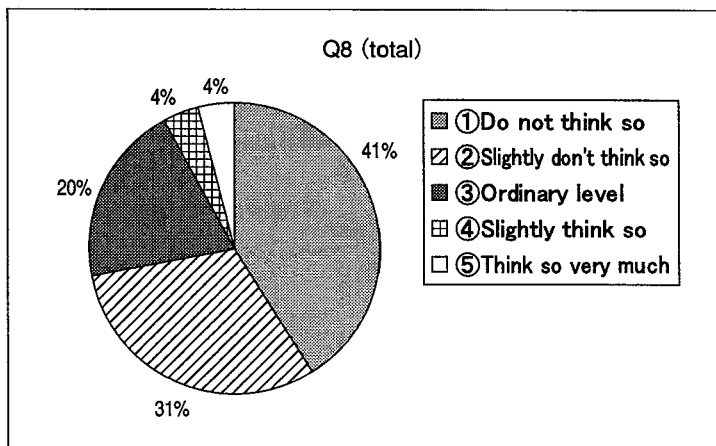79% examinees answered that they do not want to use it.
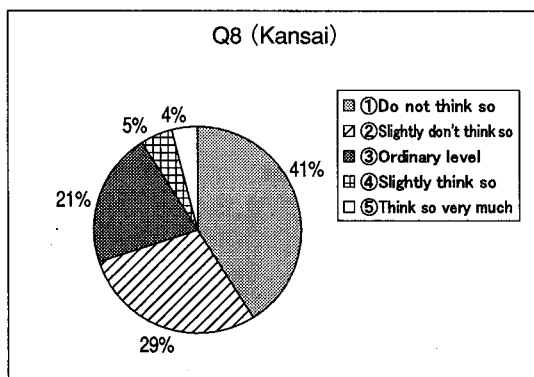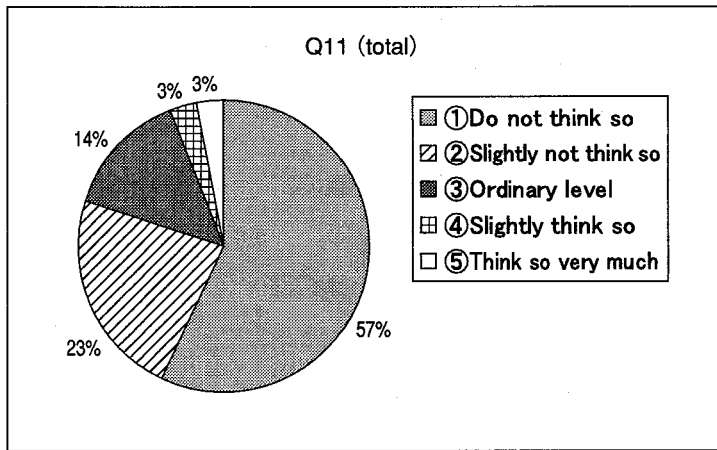
Fig. 4.29. Do you want to use nanaco?
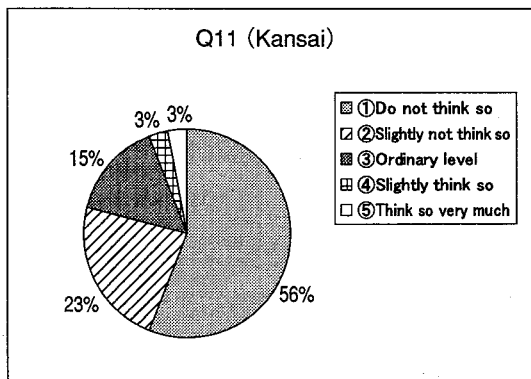
Fig. 4.30. Do you want to use nanaco (Kansai) ?　　　Fig. 4.31. Do you want to use nanaco (Kanto) ?
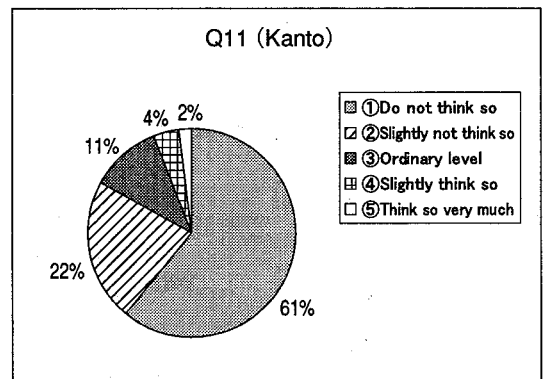
⑫ **Q12 : Why is that?**

Those who want to use it selected the items "Able to settle payment without having change". But the point is rather low and they are weak on the whole.
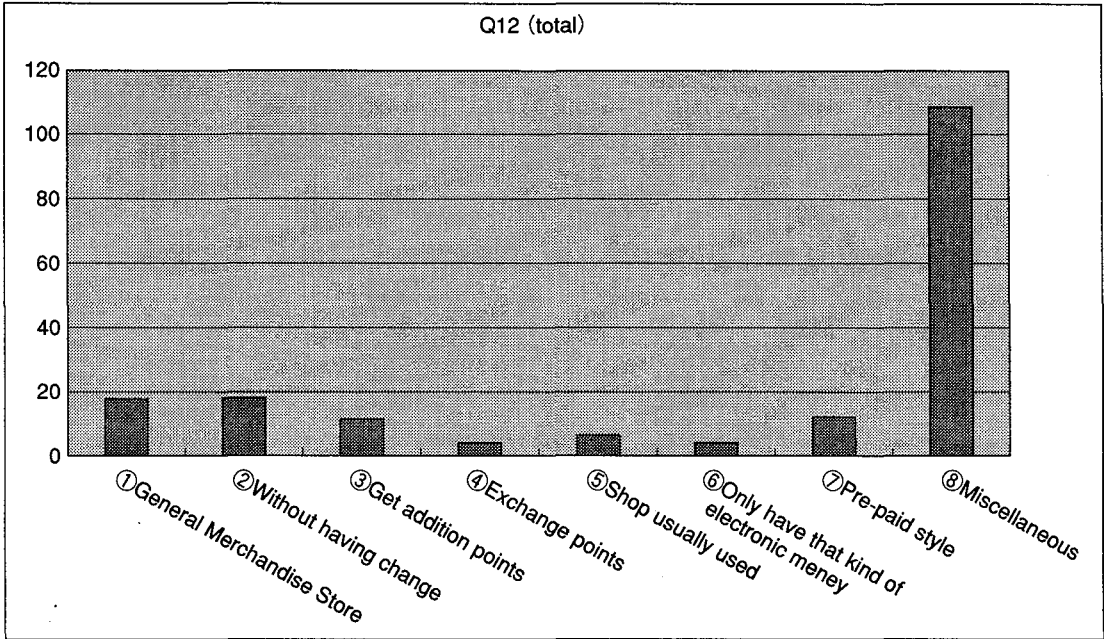
Fig. 4.32. Why is that (Q12) ?
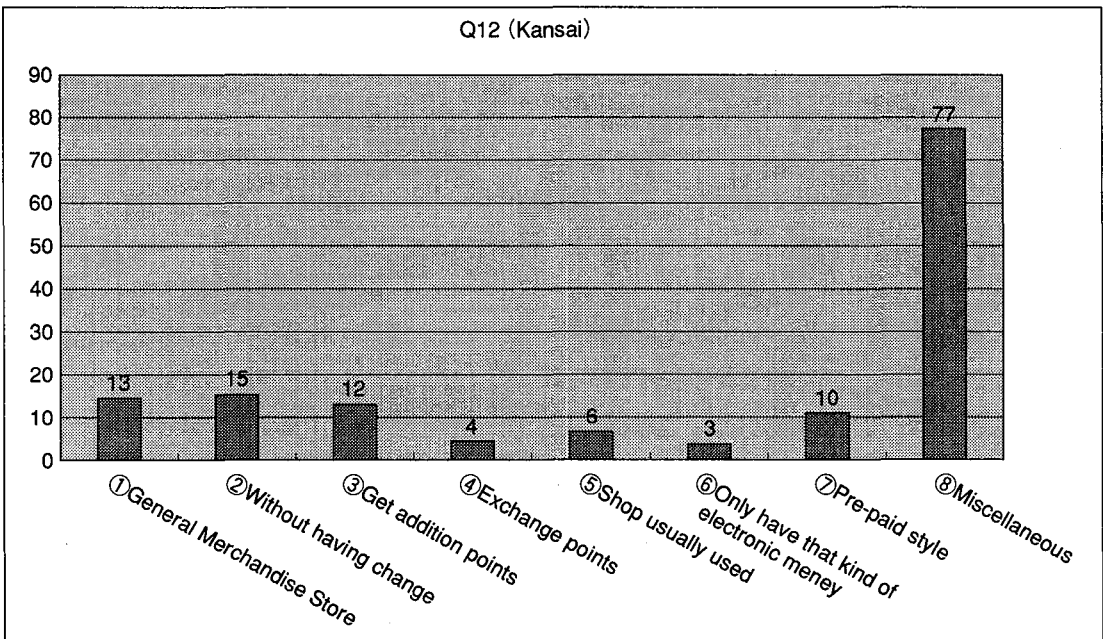
Fig. 4.33. Why is that (Q12 : Kansai) ?
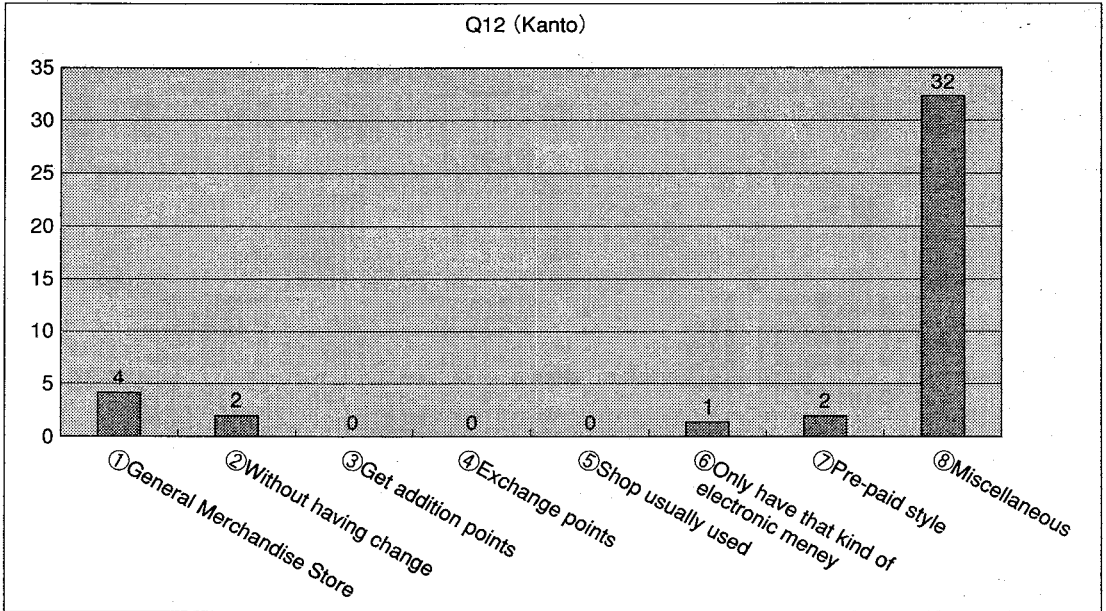
Fig. 4.34. Why is that（Q12：Kanto）?

⑬ **Q13：What is an important point when you use electronic money?**

"Able to use when buying at the shop usually used", "There are many shops in which electronic money can be used", are selected well.

Fig. 4.35. What is an important point?

Q13 (Kansai)

Values (bars, left to right):
105, 82, 54, 47, 64, 42, 61, 22, 26, 42, 25, 18, 13, 21, 10, 8, 6, 8

Categories:
①Shop usually used, ②Many shops that..., ③Easy to handle, ④Many places whe..., ⑤Points are added, ⑥Security is stren..., ⑦Discount, ⑧Charge by variou..., ⑨Confirm residual..., ⑩Reliable company..., ⑪Convenient to set..., ⑫Ample service be..., ⑬Mobile phone, ⑭Confirm purchase..., ⑮Many people use it, ⑯Upper bound restr..., ⑰Have a variety of..., ⑱Miscellaneous
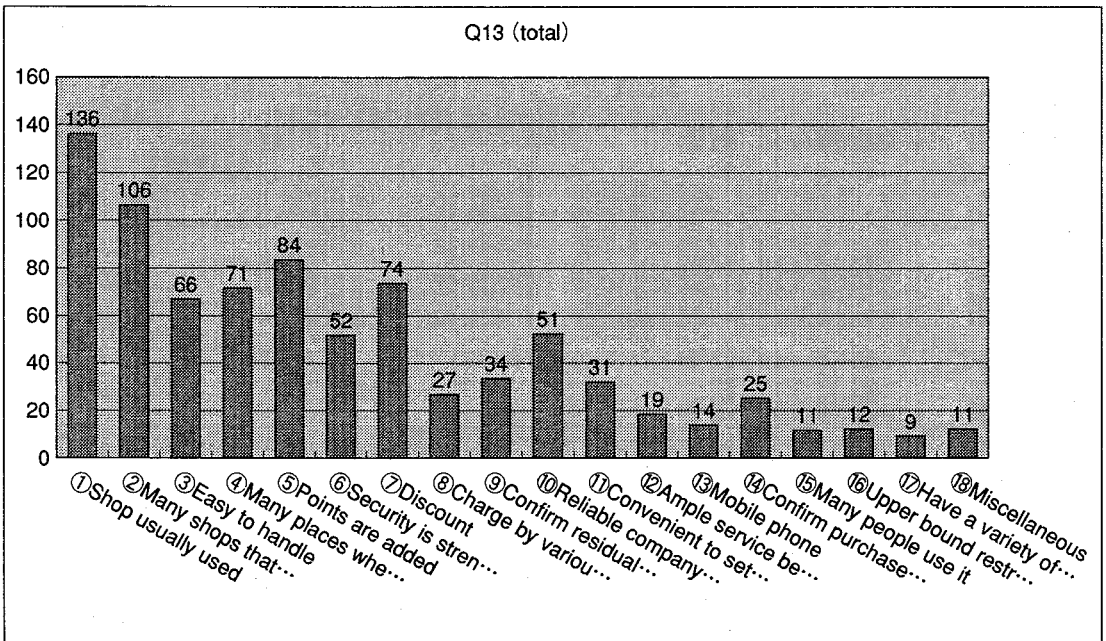
Fig. 4.36. What is an important point (Kansai) ?

Q13 (Kanto)

Values (bars, left to right):
31, 24, 12, 24, 20, 10, 13, 5, 8, 9, 6, 1, 1, 4, 1, 4, 3, 3

Categories:
①Shop usually used, ②Many shops that..., ③Easy to handle, ④Many places whe..., ⑤Points are added, ⑥Security is stren..., ⑦Discount, ⑧Charge by variou..., ⑨Confirm residual..., ⑩Reliable company..., ⑪Convenient to set..., ⑫Ample service be..., ⑬Mobile phone, ⑭Confirm purchase..., ⑮Many people use it, ⑯Upper bound restr..., ⑰Have a variety of..., ⑱Miscellaneous

Fig. 4.37. What is an important point (Kanto) ?

⑭ Q14：Where do you use electronic money most often?

"Convenience store" and "Shop in station" are selected well for the place electronic money is used. Much differences have been revealed for the usage by Kanto area and by Kansai area. As for convenience store, about 45% in Kansai area while about 25% in Kanto area. On the other hand, as for shop in station, 15% in Kansai area and about 40% in Kanto area.
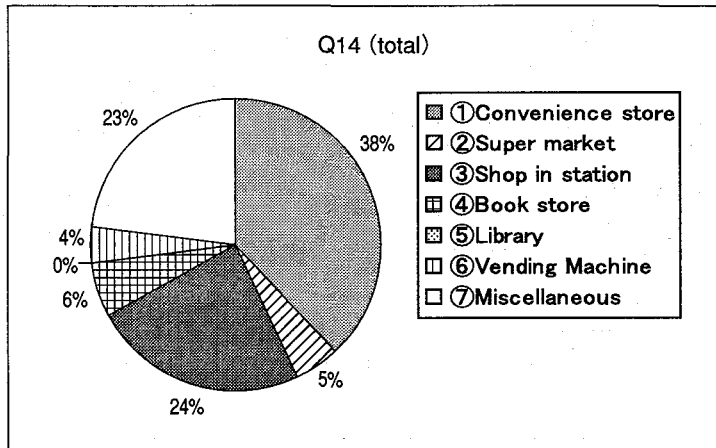
Fig. 4.38. Where do you use?
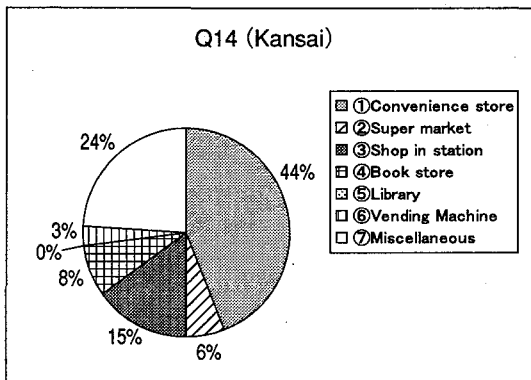
Fig. 4.39. Where do you use (Kansai)?
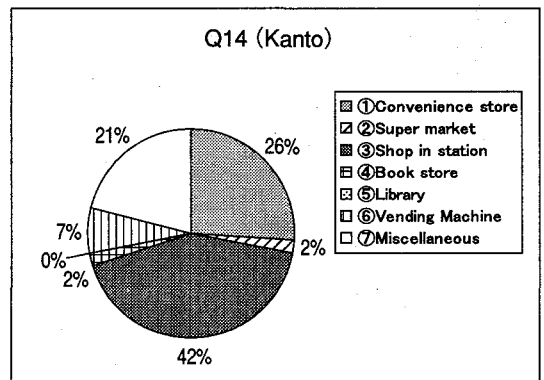
Fig. 4.40. Where do you use (Kanto)?

⑮ Q15：How many often do you spend electronic money in a month?

Usage of 1～9 frequencies in a month occupies nearly half of the share. 1～2 times in a week would be often the case.

Q15 (total)

7%
8%
14%
24%
47%

① ①1〜9
② ②10〜19
③ ③20〜29
④ ④30〜39
⑤ ⑤40〜
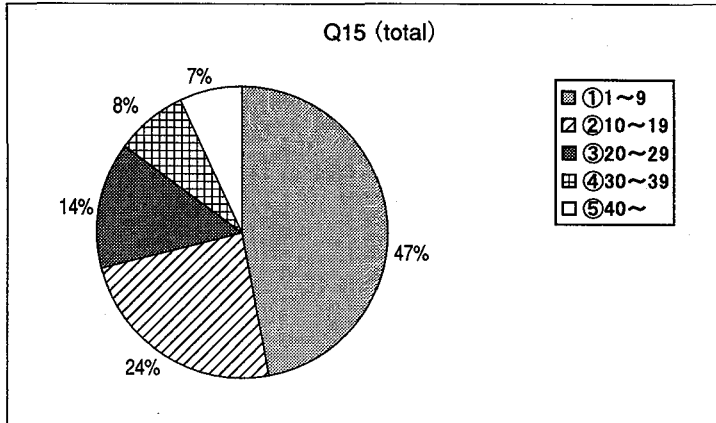
Fig. 4.41. How many often do you spend?

Q15 (Kansai)

8%
6%
15%
25%
46%

① ①1〜9
② ②10〜19
③ ③20〜29
④ ④30〜39
⑤ ⑤40〜
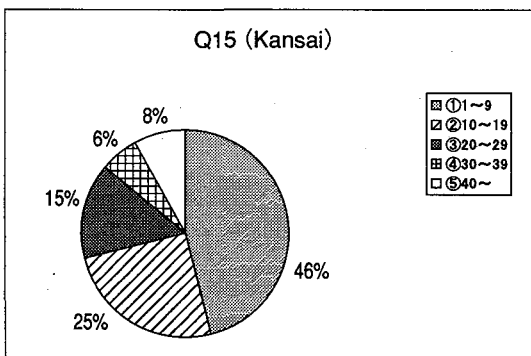
Fig. 4.42. How many often do you spend (Kansai)?

Q15 (Kanto)

4%
11%
11%
21%
53%

① ①1〜9
② ②10〜19
③ ③20〜29
④ ④30〜39
⑤ ⑤40〜
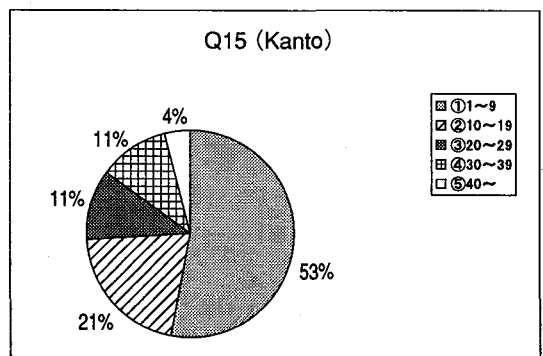
Fig. 4.43. How many often do you spend (Kanto)?

⑯ **Q16 : How much electronic money do you spend in a month?**

Usage money of 0〜3000yen in a month takes nearly half of the share. Amount of usage by electronic money is rather small.

Q16 (total)

7%
18%
14%
7%
24%
30%

① ①〜999
② ②1000〜2999
③ ③3000〜4999
④ ④5000〜9999
⑤ ⑤10000〜19999
⑥ ⑥20000〜
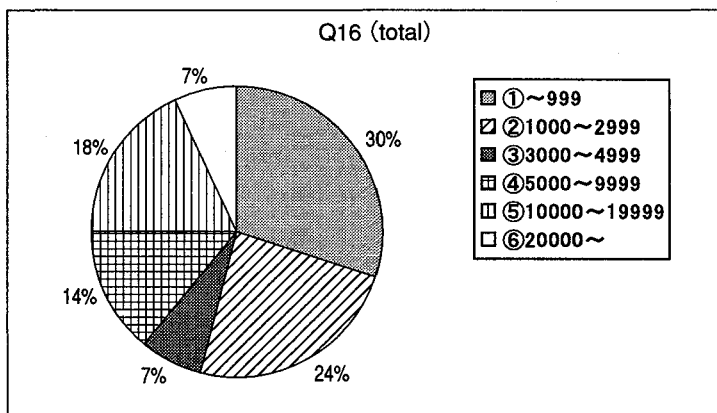
Fig. 4.44. How much do you spend?
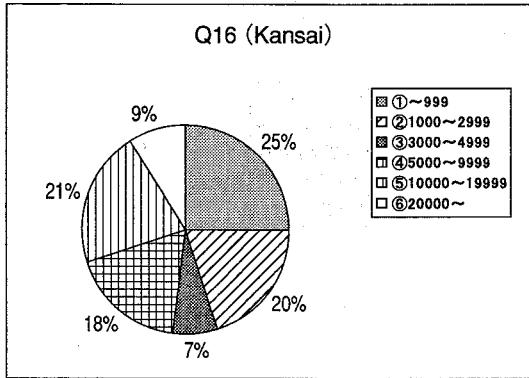
Fig. 4. 45. How much do you spend (Kansai) ?
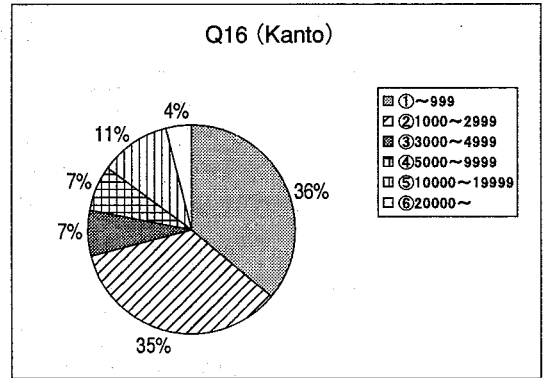
Fig. 4. 46. How much do you spend (Kanto) ?

⑰ **Q17 : What do you expect for electronic money in the future?**

"Combine plural electronic money", " Increase the amount of shops in which electronic money can be used", "Add additional service such as points, discounts" and "Strengthen security" are the dominant answers.
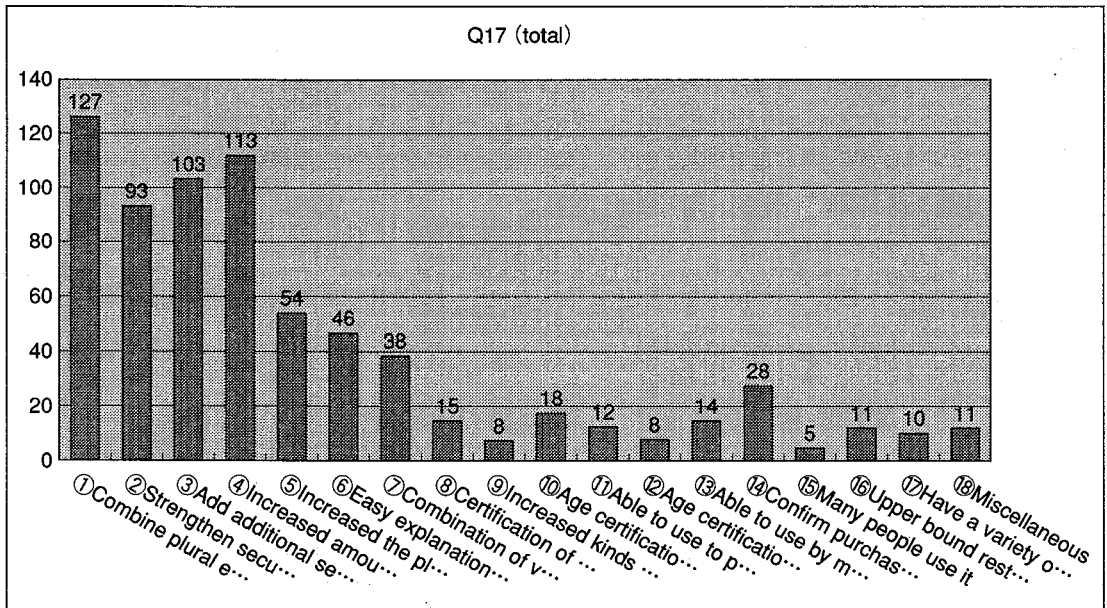
Fig. 4. 47. What do you expect?
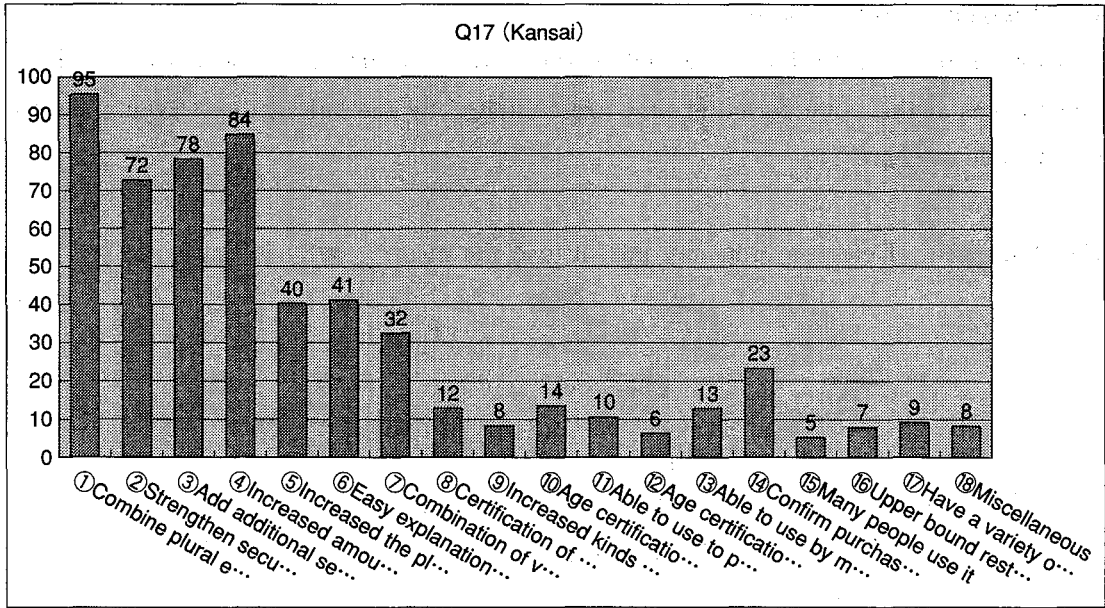
Fig. 4.48. What do you expect（Kansai）?
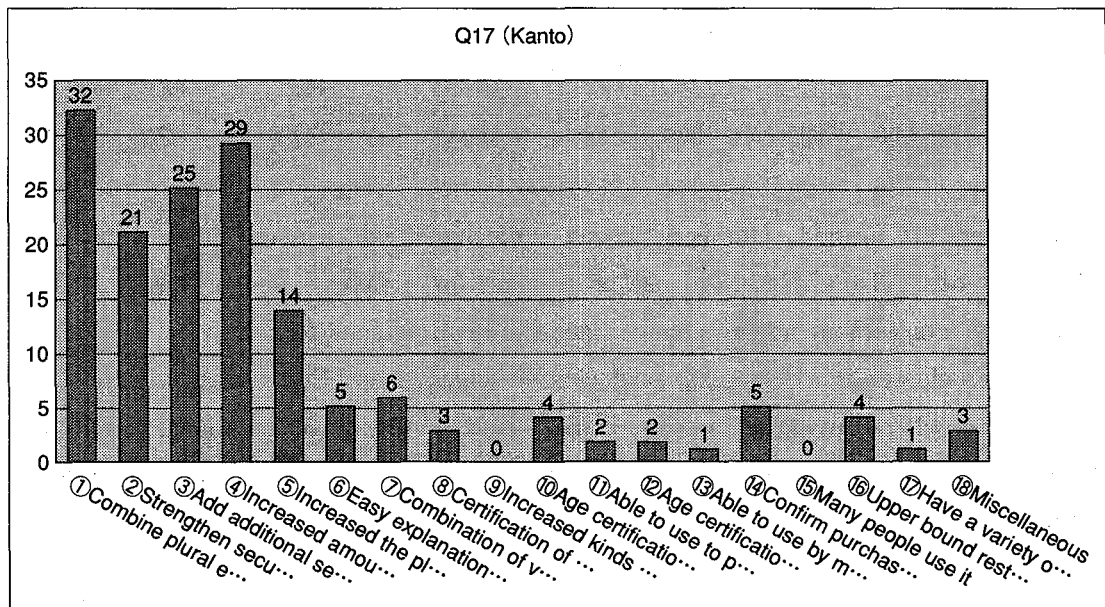
Fig. 4.49. What do you expect（Kanto）?

4.2. Analysis using Key Graph

Key Graph is a method to visualize the data structure using key words. Data occurrences at the same period of time are exhibited by the link of Key Graph. We use Key Graph software [7].

(1) What kind of electronic money do you use the most? / Why is that?
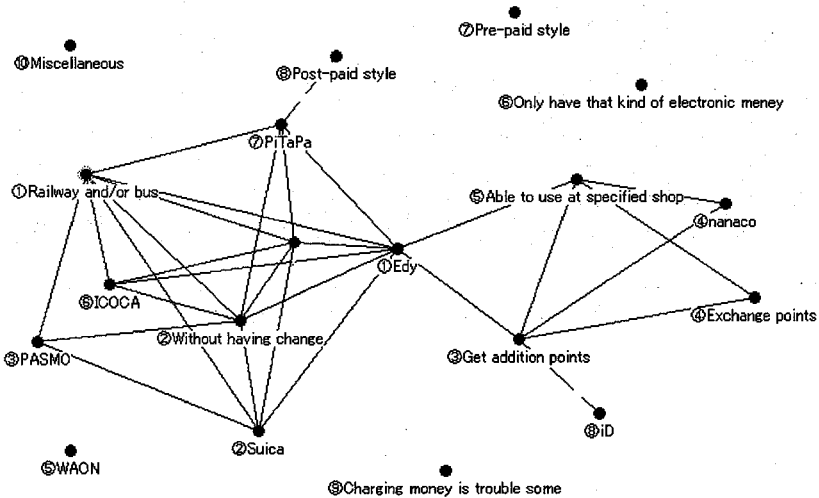
Fig. 4.50. What kind of electronic money do you use the most? / Why is that?

Two clusters are formed. One is a railway card cluster which uses "Suica" "PASMO" "ICOCA" and "PiTaPa". "Able to use as a ticket for a railway and/or bus", "Able to settle payments without having change" are the main reasons to hold.

Another cluster is a shopping card cluster which uses "Edy", "nanaco" and "iD". "Able to use where buying at the shop usually used", "Able to get additional points" are the main reasons to hold which implies that they choose convenience and incentive of getting points.

(2) What kind of method do you most often use when riding on a railway?/ Why is that?
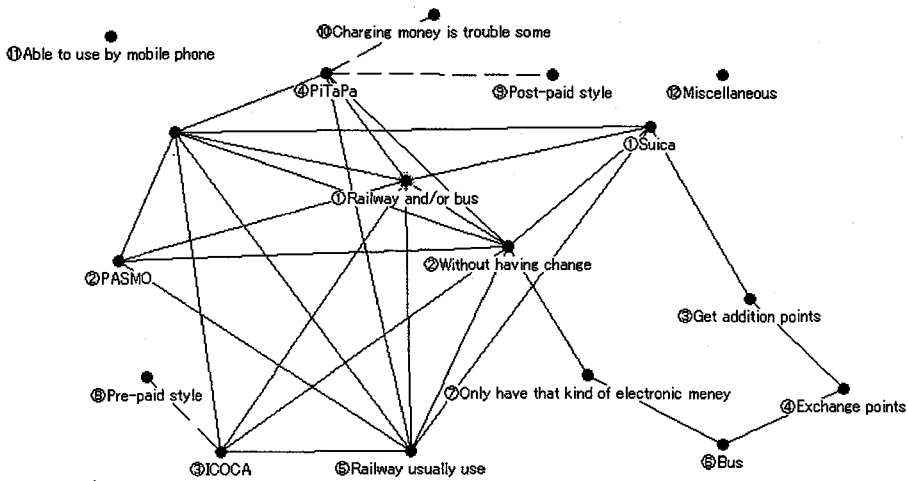
Fig. 4.51. What kind of electronic money do you use the most? / Why is that?

One big cluster is formed. "Suica", "PASMO", "ICOCA" and "PiTaPa" are all selected. "Because it is a post-paid style" and "Charging money is troublesome" are selected simultaneously for the reason of using "PiTaPa".

(3) Do you want to use the electronic money nanaco?

One big cluster is formed. "Able to use at convenience stores", "Able to settle payments without having change", "Able to get additional points", etc. are esteemed.
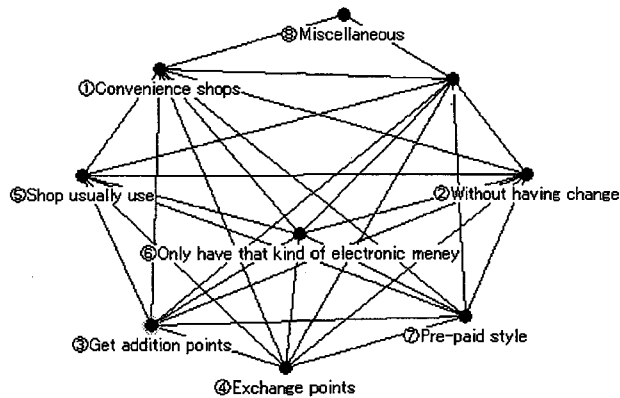
Fig. 4.52. Do you want to use the electronic money nanaco ?

(4) **What is an important point when you use electronic money?/ How many often do you spend electronic money in a month?/ How much electronic money do you spend in a month?**
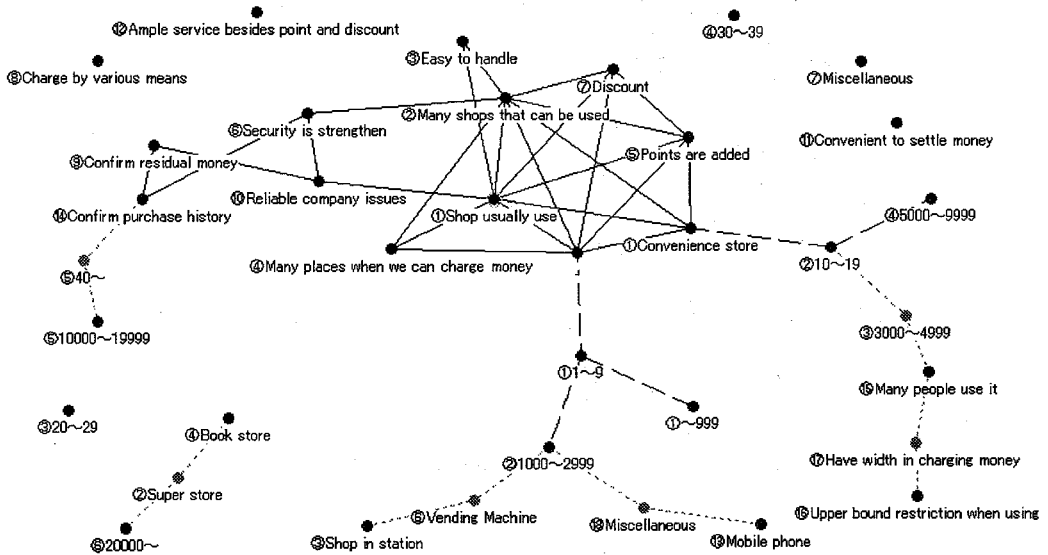
Fig. 4.53. What is an important point when you use electronic money?/ How many often do you spend electronic money in a month?/ How much electronic money do you spend in a month?

One big cluster is formed. Items concerning convenience such as "Able to use when buying at the shop usually used", "There are many shops in which electronic money can be used" are esteemed especially. Next, items concerning an additional value such as "Points are added", "Discount" follow them.

Heavy users who spend electronic money more than 40 times in a month, and those who use 10,000～19,999 yen select "Able to confirm purchase history". This item has strong connection with such items as "Security is strengthened", "Able to confirm residual money", "Reliable company issues electronic money", which imply having higher order of needs.

(5) **What is an important point when you use electronic money? / How about the situation using electronic money? / What do you expect for electronic money in the future?**
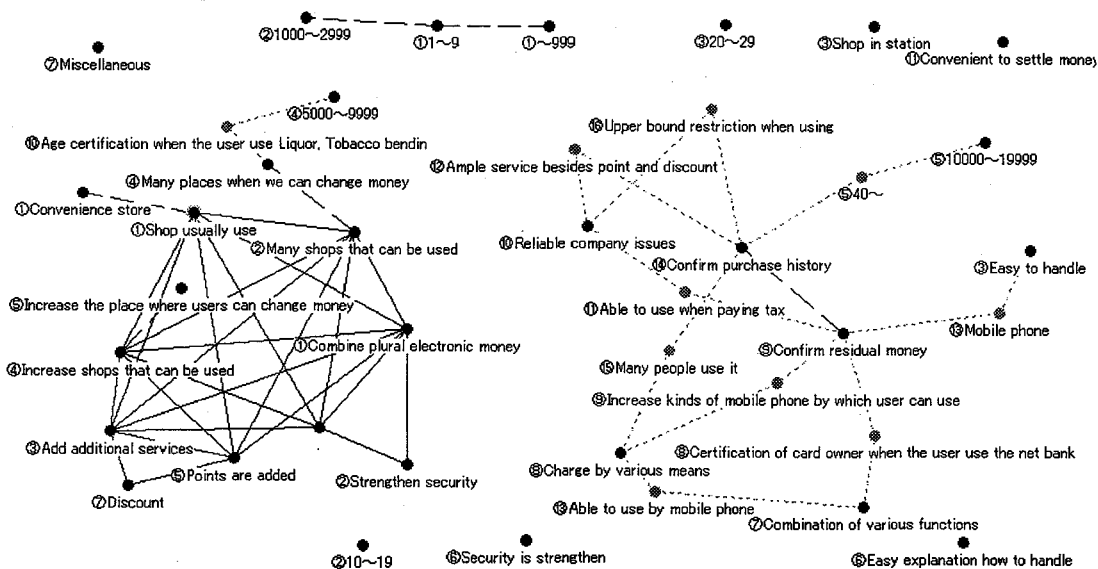
Fig. 4.54. What is an important point when you use electronic money? / How about the situation using electronic money? / What do you expect for electronic money in the future?

One definite cluster and vague cluster (co-occurrence rate is rather low) are formed. In the definite cluster, "Able to use when buying at the shop usually used", "There are many shops in which electronic money can be used", "Add additional services such as points, discounts", "Points are added", "Combine plural electronic money", "Increased amount of shops in which electronic money can be used" are selected well.

In another cluster, "Able to confirm residual money", "Able to confirm purchase history", "Reliable company issues electronic money", "Able to change by various means" are selected well which contains rather high needs. Heavy users select "Able to confirm purchase history".

(6) **Do you want to use the electronic money nanaco?/ Why is that?**
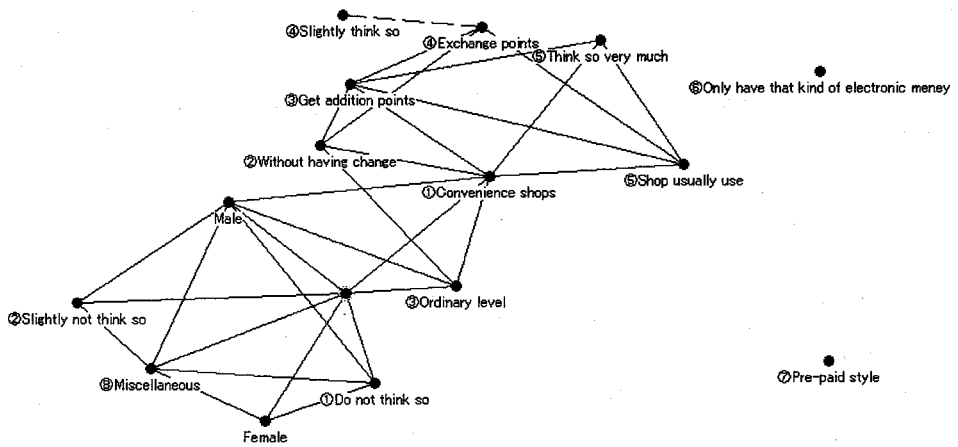
Fig. 4.55. Do you want to use the electronic money nanaco? / Why is that?

Two clusters are formed. One is a cluster exhibited on the upper right in Fig. 4.55. "Able to use at convenience stores", "Able to settle payments without having change", "Able to get additional points", "Able to use when buying at the shop usually used" are selected well which have the positive meaning. On the other hand, another cluster forms by the contents of negative attitude for having card.

(7) **Do you want to use the electronic money WAON?/ Why is that?**

Two clusters are formed. One is the left-hand side cluster which has the positive meaning such as "Able to settle payments without having change", "Able to get additional points", "Able to use when buying at the shop usually used". Another one is a cluster which has the negative meaning.
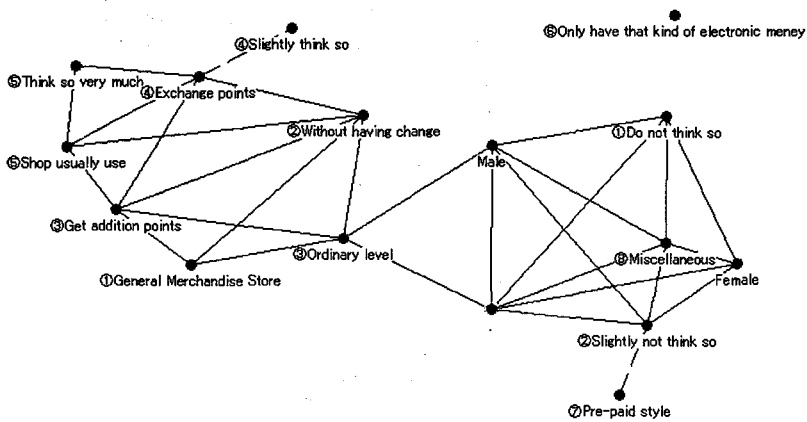
Fig. 4.56. Do you want to use the electronic money WAON?/ Why is that?

4.3. Correspondence Analysis

(1) What is an important point when you use electronic money?

Two clusters are formed. One is a cluster concerning convenience such as "Able to use when buying at the shop usually used", "There are many shops in which electronic money can be used", "Easy to handle", "Able to use via mobile phone", "There are many places when we can change money", "Able to charge by various means". Another one is a cluster concerning high level request for reliability of card such as "Security is strengthened", "Able to confirm residual money", "Able to confirm purchase history", "Many people use it".

Column point of Q13

Symmetrical Normalization

1.Able to use when buying at the shop usually used
2.There are many shops in which electronic money can be used
3.Easy to handle
4.There are many places when we can charge money
5.Points are added
6.Security is strengthened
7.Discount
8.Able to charge by various means
9.Able to confirm residual money
10.Reliable company issues electronic money
11.Convenient to settle debts
12.Ample service besides points and discounts
13.Able to use via mobile phone
14.Able to confirm purchase history
15.Many people use it
16.Upper bound restriction when using
17.Have a variety of money charging services

Fig. 4.57. What is an important point when you use electronic money?

5. REMARKS

ICOCA is the most one users have, which is followed by Edy, Suica, PiTaPa and PASMO. On the contrary, smartplus and QUICpay have only several percents share. Cards of payment for traffic are prevailing. In Kasai area, ICOCA and PiTaPa are prevailing and in Kanto area, Suica and PASMO are prevailing. Edy has relatively a big share in both areas.

The reasons of using electronic money are "Able to use as a ticket for a railway and /or bus" and "Able to settle payment without having change". Comparing Kansai area with Kanto area, the former one selects items "Because it is a post-paid style" and "Charging money is troublesome" much more than the latter one. It may be because PiTaPa, which is well used in Kansai area, is a "Post-paid style" and has also the style

that "charging money is not required".

The important points when using electronic money are "Able to use when buying at the shop usually used", "There are many shops in which electronic money can be used".

Heavy users select "Able to confirm purchase history", "Able to confirm residual money", "Reliable company issues electronic money", "Able to change by various means", which contain rather high needs.

The expectations for electronic money in the future are as follows. "Combine plural electronic money", "Increase the amount of shops in which electronic money can be used", "Add additional service such as points, discounts" and "Strengthen security" are the dominant answers.

6. CONCLUSION

Electronic money usage is widespread at present in Japan such as IC traffic cards on the railroad. In addition to the usage for railroads, payment by electronic money has become possible in such places as convenience stores, supermarkets and restaurants.

This paper analyzed the thought of consumers for about the IC cards, which had a big influence on the buying behavior of consumers. For this purpose, we created a questionnaire survey of using IC card on purchasing. We utilized the text mining method such as Key Graph.

Some interesting and instructive results were obtained. The important point when using electronic money are "Able to use when buying at the shop usually used", "There are many shops in which electronic money can be used", "There are many places when we can change money", "Points are added", "Combine plural electronic money", "Increased amount of shops in which electronic money can be used". They seek convenience and high level reliability.

These are utilized for constructing a much more effective and useful IC card system which should be popularized by consumers.

In conclusion, we appreciate Mr. Yuji Higuchi and Mr. Kazuya Akaishi for their helpful support of work.

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7．http://www.chokkan.org/software/polaris/#id4713690

APPENDIX：Questionnaire about Using Electronic Money by IC card

Please answer the following questions. Please write down ○ to the answering items. Plural selection is allowed for Question 1, 2, 4, 5, 6, 9, 12, 13, 17. Select ①〜⑤ of the right column for the Question 7, 8, 10, 11.

1. What kind of electronic money do you have?

Q1 ①Edy ②Suica ③PASMO ④nanaco ⑤WAON ⑥ICOCA ⑦PiTaPa ⑧iD ⑨QUICPay ⑩Smartplus ⑪Miscellaneous (　　)

2. What kind of electronic money do you use?

Q2 ①Edy ②Suica ③PASMO ④nanaco ⑤WAON ⑥ICOCA ⑦PiTaPa ⑧iD ⑨QUICPay ⑩Smartplus ⑪Miscellaneous (　　)

3. What kind of electronic money do you use the most?

Q3 ①Edy ②Suica ③PASMO ④nanaco ⑤WAON ⑥ICOCA ⑦PiTaPa ⑧iD ⑨QUICPay ⑩Smartplus ⑪Miscellaneous (　　)

4. Why is that?

Q4 ①Able to use as a ticket for a railway and/or bus ②Able to settle payments without having change ③Able to get additional points ④Able to exchange points with other goods/services ⑤Able to use when buying at the shop usually used ⑥Only have that kind of electronic money ⑦Because it is a pre-paid style (not credit card style) ⑧Because it is a post-paid style ⑨Charging money is troublesome ⑩Miscellaneous (　　)

5. What kind of method do you most often use when riding on a railway?

Q5 <pre-paid style> ①Suica ②PASMO ③ICOCA   <post-paid style> ④PiTaPa

6. Why is that?

Q6 ①Able to use as a ticket for a railway and/or bus
②Able to settle payments without having change
③Able to get additional points
④Able to exchange points with other goods/services
⑤Able to use when riding on the railway
⑥Able to use when riding on the bus
⑦Only have that kind of electronic money
⑧Because it is a pre-paid style (not credit card style)

⑨Because it is a post-paid style
⑩Charging money is troublesome
⑪Able to use via mobile phone
⑫Miscellaneous (   )

7. Do you know the electronic money nanaco, released by Seven & I holdings in spring, 2007?

Importance	Do not know it	Slightly not sure	Ordinary level	Slightly know it	Know it very well
Q7	①	②	③	④	⑤

8. Do you want to use the electronic money nanaco?

Importance	Do not think so	Slightly do not think so	Ordinary level	Slightly think so	Think so very much
Q8	①	②	③	④	⑤

9. Why is that?

Q9 ①Able to use at convenience stores
②Able to settle payments without having change
③Able to get additional points
④Able to exchange points with other goods/services
⑤Able to use when buying at the shop usually used
⑥Only have that kind of electronic money
⑦Because it is a pre-paid style (not credit card style)
⑧Miscellaneous (   )

10. Do you know the electronic money WAON released by ION CO. Ltd. in spring, 2007?

Importance	Do not know it	Slightly not know it	Ordinary level	Slightly know it	Know it very much
Q10	①	②	③	④	⑤

11. Do you want to use the electronic money WAON?

Importance	Do not think so	Slightly not think so	Ordinary level	Slightly think so	Think so very much
Q11	①	②	③	④	⑤

12. Why is it?

Q12 ①Able to use at General Merchandise Store
②Able to settle payments without having change
③Able to get additional points
④Able to exchange points with other goods/services
⑤Able to use when buying at the shop usually used
⑥Only have that kind of electronic money
⑦Because it is a pre-paid style (not credit card style)
⑧Miscellaneous (   )

13. What is an important point when you use electronic money?

Q13 ①Able to use when buying at the shop usually used
②There are many shops in which electronic money can be used
③Easy to handle
④There are many places when we can charge money
⑤Points are added
⑥Security is strengthened
⑦Discount
⑧Able to charge by various means
⑨Able to confirm residual money
⑩Reliable company issues electronic money
⑪Convenient to settle debts
⑫Ample service besides points and discounts
⑬Able to use via mobile phone
⑭Able to confirm purchase history
⑮Many people use it
⑯Upper bound restriction when using
⑰Have a variety of money charging services
⑱Miscellaneous (   )

14. Where do you use electronic money most often?

Q14 ①Convenience store ②Super market ③Shop in station ④Book store ⑤Library ⑥Vending Machine   ⑦Miscellaneous (   )

15. How many often do you spend electronic money in a month?

Q15   <average>   (   ) times

16. How much electronic money do you spend in a month?

Q16   <average>   (   ) yen

17. What do you expect for electronic money in the future?

Q17 ①Combine plural electronic money
②Strengthen security
③Add additional services such as points, discounts
④Increased amount of   shops in which electronic money can be used
⑤Increased places where users can charge money
⑥Easy explanation on how to use
⑦Combination of credit card function and cash card function
⑧Certification of card owner using the electronic money card when the user uses net banking
⑨Increased kinds of mobile phone by which user can use electronic money
⑩Age certification by electronic money card when the user uses Liquor or Tobacco vending machines
⑪Able to use to paying tax
⑫Age certification by electronic money card when the user enters into a bar or an adult movie theater
⑬Able to use by mobile phone
⑭Able to confirm purchase history
⑮Many people use it
⑯Upper bound restriction when using
⑰Have a variety of money charging services
⑱Miscellaneous (   )

18. About yourself

Q18 <Age> (   ) years old   <Sex> ① Male ② Female
<Address> Prefecture : (   ) City : (   )