

KFC Survey Cluster Report From SPSS

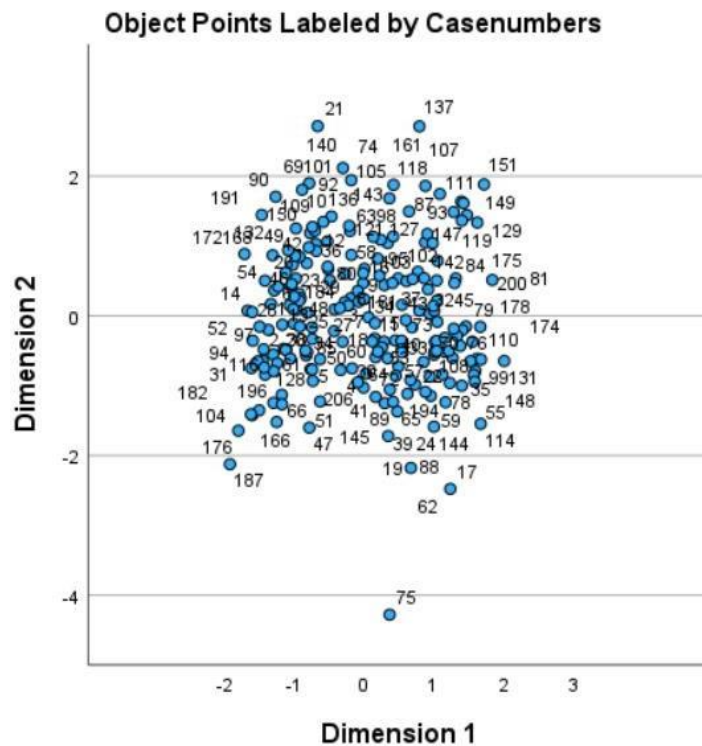
a). Using SPSS and Survey-Data, carry out a cluster analysis using the procedure Two-step cluster in SPSS.

Dimension Reduction

Model Summary

Dimension	Cronbach's Alpha	Variance Accounted For		
		Total (Eigenvalue)	Inertia	% of Variance
1	.819	4.251	.283	28.343
2	.690	2.808	.187	18.720
Total		7.059	.471	
Mean	.768 ^a	3.530	.235	23.531

a. Mean Cronbach's Alpha is based on the mean Eigenvalue.

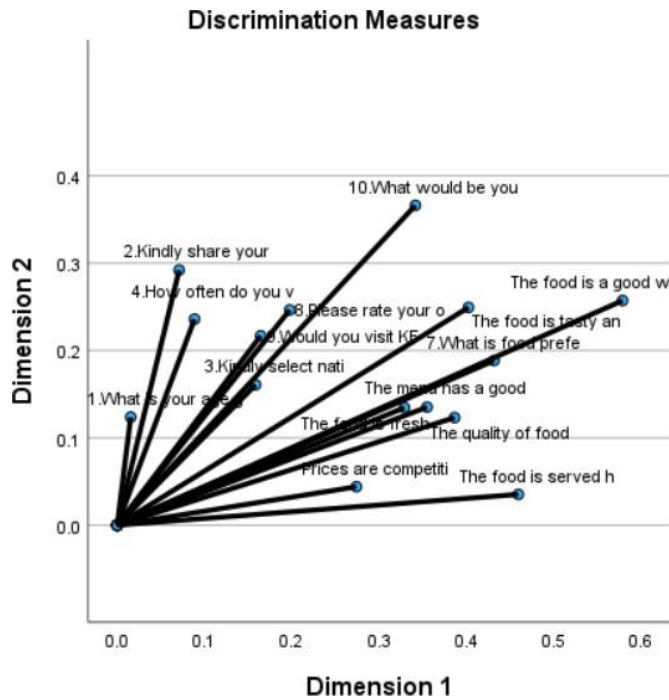


Variable Principal Normalization.

Discrimination Measures

Discrimination Measures

	Dimension		Mean
	1	2	
1.What is your age group?	.015	.124	.070
2.Kindly share your gender?	.071	.292	.181
3.Kindly select nationality	.158	.161	.160
4.How often do you visit KFC?	.089	.236	.162
The food is served hot	.459	.035	.247
The menu has a good variety of items	.355	.135	.245
The quality of food is excellent	.386	.123	.255
The food is tasty and flavorful	.402	.249	.326
The food is fresh	.329	.134	.232
The food is a good way for the money	.579	.257	.418
Prices are competitive	.274	.044	.159
7.What is food preference at KFC?	.431	.188	.310
8.Please rate your overall satisfaction with our restaurant service:	.197	.246	.222
9.Would you visit KFC in another country?	.164	.217	.190
10.What would be your second preference of fast-food?	.341	.366	.354
Active Total	4.251	2.808	3.530
% of Variance	28.343	18.720	23.531



Variable Principal Normalization.

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	@1.What is your age	String	12	0	1.What is your ...	None	None	12	Left	Nominal	Input
2	@2.Kindly share your	String	17	0	2.Kindly share ...	None	None	17	Left	Nominal	Input
3	@3.Kindly select nati	String	7	0	3.Kindly select ...	None	None	7	Left	Nominal	Input
4	@4.How often do you v	String	11	0	4.How often do...	None	None	11	Left	Nominal	Input
5	The food is served h	String	17	0	The food is ser...	None	None	17	Left	Nominal	Input
6	The menu has a good	String	17	0	The menu has ...	None	None	17	Left	Nominal	Input
7	The quality of food	String	17	0	The quality of f...	None	None	17	Left	Nominal	Input
8	The food is tasty an	String	17	0	The food is tast...	None	None	17	Left	Nominal	Input
9	The food is fresh	String	17	0	The food is a g...	None	None	17	Left	Nominal	Input
10	The food is a good w	String	17	0	The food is a g...	None	None	17	Left	Nominal	Input
11	Prices are competitive	String	17	0	Prices are com...	None	None	17	Left	Nominal	Input
12	@7.What is food preference	String	27	0	7.What is food ...	None	None	27	Left	Nominal	Input
13	@8.Please rate your o	String	34	0	8.Please rate y...	None	None	34	Left	Nominal	Input
14	@9.Would you visit KFC	String	5	0	9.Would you vi...	None	None	5	Left	Nominal	Input
15	@10.What would be your choice	String	57	0	10.What would ...	None	None	50	Left	Nominal	Input
16	OBSCO1_1	Numeric	8	2	Object scores ...	None	None	10	Right	Scale	Input
17	OBSCO2_1	Numeric	8	2	Object scores ...	None	None	10	Right	Scale	Input
18	TSC_1200	Numeric	10	0	TwoStep Clust...	{-1, Outlier ...	None	8	Right	Nominal	Input

The two new axes are highlighted in the above figure using red colour.

Step 2: Classify using Two step cluster method

TwoStep Cluster

Cluster Distribution

		N	% of Combined	% of Total
Cluster	1	78	37.1%	37.1%
	2	49	23.3%	23.3%
	3	83	39.5%	39.5%
	Combined	210	100.0%	100.0%
Total		210		100.0%

Cluster Profiles

Age

1.What is your age group?

		15-20		21-30		31-40		40 and above	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	23	46.9%	26	28.6%	22	42.3%	7	38.9%
	2	3	6.1%	28	30.8%	15	28.8%	3	16.7%
	3	23	46.9%	37	40.7%	15	28.8%	8	44.4%
	Combined	49	100.0%	91	100.0%	52	100.0%	18	100.0%

Gender

2.Kindly share your gender?

		Female		Male		Prefer not to say	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	41	36.3%	37	51.4%	0	0.0%
	2	29	25.7%	6	8.3%	14	56.0%
	3	43	38.1%	29	40.3%	11	44.0%
	Combined	113	100.0%	72	100.0%	25	100.0%

Nationality

3.Kindly select nationality

		Chinese		French		Indian		Other	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	33	63.5%	10	14.9%	30	49.2%	5	16.7%
	2	4	7.7%	31	46.3%	7	11.5%	7	23.3%
	3	15	28.8%	26	38.8%	24	39.3%	18	60.0%
	Combined	52	100.0%	67	100.0%	61	100.0%	30	100.0%

Frequency of visit

		Daily		Monthly		Once a year		Weekly	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	8	53.3%	42	41.6%	10	34.5%	18	27.7%
	2	1	6.7%	27	26.7%	10	34.5%	11	16.9%
	3	6	40.0%	32	31.7%	9	31.0%	36	55.4%
	Combined	15	100.0%	101	100.0%	29	100.0%	65	100.0%

Food Served Hot ?

The food is served hot

		Agree		Disagree		Neutral		Strongly agree		Strongly Disagree	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	52	66.7%	0	0.0%	18	30.0%	7	43.8%	1	5.3%
	2	16	20.5%	10	27.0%	17	28.3%	4	25.0%	2	10.5%
	3	10	12.8%	27	73.0%	25	41.7%	5	31.3%	16	84.2%
	Combined	78	100.0%	37	100.0%	60	100.0%	16	100.0%	19	100.0%

Variety of Food

The menu has a good variety of items

		Agree		Disagree		Neutral		Strongly agree		Strongly Disagree	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	53	54.6%	0	0.0%	8	18.2%	17	58.6%	0	0.0%
	2	27	27.8%	7	18.9%	10	22.7%	4	13.8%	1	33.3%
	3	17	17.5%	30	81.1%	26	59.1%	8	27.6%	2	66.7%
	Combined	97	100.0%	37	100.0%	44	100.0%	29	100.0%	3	100.0%

Quality of Food

The quality of food is excellent

		Agree		Disagree		Neutral		Strongly agree		Strongly Disagree	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	39	50.0%	1	3.8%	7	13.0%	31	67.4%	0	0.0%
	2	23	29.5%	0	0.0%	13	24.1%	13	28.3%	0	0.0%
	3	16	20.5%	25	96.2%	34	63.0%	2	4.3%	6	100.0%
	Combined	78	100.0%	26	100.0%	54	100.0%	46	100.0%	6	100.0%

Taste of the food

The food is tasty and flavorful											
Cluster		Agree		Disagree		Neutral		Strongly agree		Strongly Disagree	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	50	62.5%	0	0.0%	4	7.1%	24	53.3%	0	0.0%
	2	8	10.0%	9	33.3%	16	28.6%	16	35.6%	0	0.0%
	3	22	27.5%	18	66.7%	36	64.3%	5	11.1%	2	100.0%
	Combined	80	100.0%	27	100.0%	56	100.0%	45	100.0%	2	100.0%

Freshness of the food

The food is fresh											
Cluster		Agree		Disagree		Neutral		Strongly agree		Strongly Disagree	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	42	46.2%	1	3.7%	12	24.0%	23	65.7%	0	0.0%
	2	27	29.7%	0	0.0%	12	24.0%	8	22.9%	2	28.6%
	3	22	24.2%	26	96.3%	26	52.0%	4	11.4%	5	71.4%
	Combined	91	100.0%	27	100.0%	50	100.0%	35	100.0%	7	100.0%

Good way for money

The food is a good way for the money											
Cluster		Agree		Disagree		Neutral		Strongly agree		Strongly Disagree	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	64	67.4%	0	0.0%	6	14.3%	8	40.0%	0	0.0%
	2	11	11.6%	4	10.0%	20	47.6%	11	55.0%	3	23.1%
	3	20	21.1%	36	90.0%	16	38.1%	1	5.0%	10	76.9%
	Combined	95	100.0%	40	100.0%	42	100.0%	20	100.0%	13	100.0%

Competitive prices

Prices are competitive											
Cluster		Agree		Disagree		Neutral		Strongly agree		Strongly Disagree	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	53	50.0%	0	0.0%	11	21.2%	14	53.8%	0	0.0%
	2	23	21.7%	1	4.5%	17	32.7%	8	30.8%	0	0.0%
	3	30	28.3%	21	95.5%	24	46.2%	4	15.4%	4	100.0%
	Combined	106	100.0%	22	100.0%	52	100.0%	26	100.0%	4	100.0%

Satisfaction Rating

8.Please rate your overall satisfaction with our restaurant service:											
Cluster		Dissatisfied		Neither Satisfied nor dissatisfied		Satisfied		Very dissatisfied		Very satisfied	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	2	10.0%	24	34.8%	29	37.2%	1	9.1%	22	68.8%
	2	2	10.0%	17	24.6%	18	23.1%	7	63.6%	5	15.6%
	3	16	80.0%	28	40.6%	31	39.7%	3	27.3%	5	15.6%
	Combined	20	100.0%	69	100.0%	78	100.0%	11	100.0%	32	100.0%

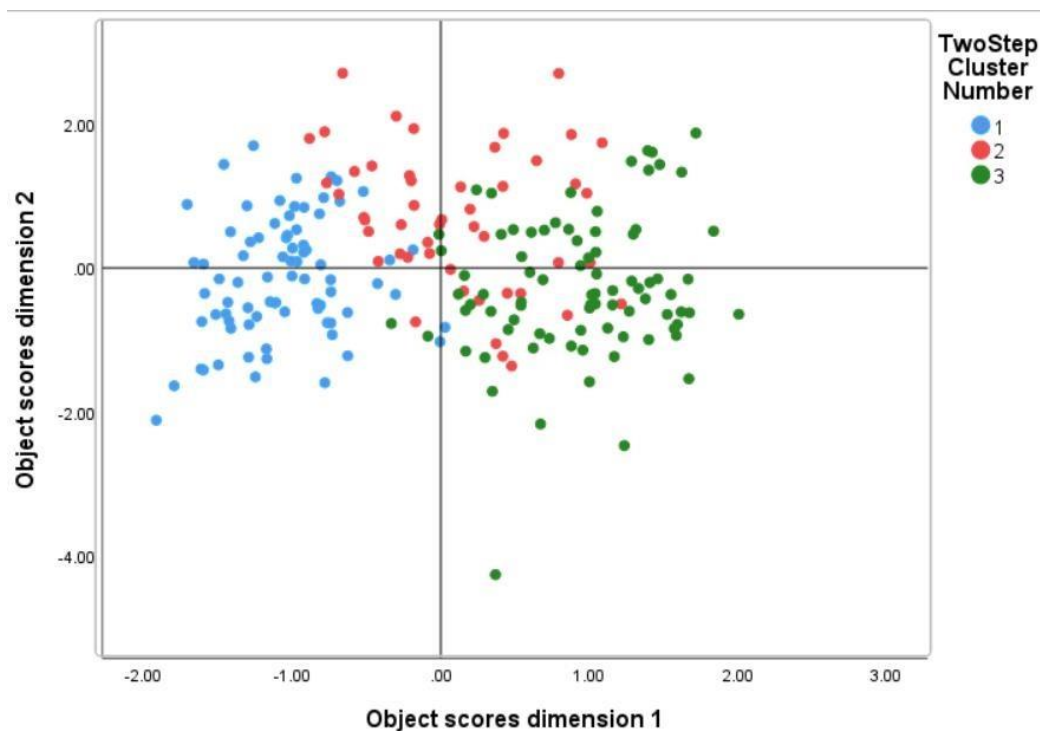
Prefer to have a KFC visit in other country ?

9.Would you visit KFC in another country?

		Maybe		No		Yes	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
Cluster	1	16	24.2%	13	19.1%	49	64.5%
	2	22	33.3%	16	23.5%	11	14.5%
	3	28	42.4%	39	57.4%	16	21.1%
	Combined	66	100.0%	68	100.0%	76	100.0%

b). Validate the clustering method and present the mapping with 3 or 4 groups (clusters).

Cluster Mapping Final Scatter plot



Cluster 1 represented by blue- Chinese Women who found it excellent

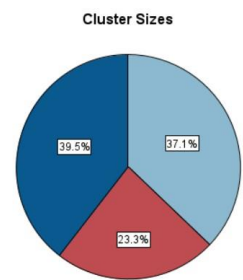
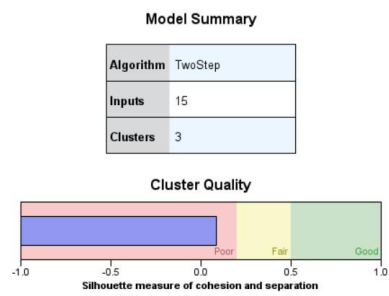
Cluster 2 represented by red- French Women satisfied

Cluster 3 represented by green- French Women neutral

Dimension2 – Axes y & Dimension1 – Axes X

Steps before reaching the scatter plot for cluster mapping

Model Viewer



Size of Smallest Cluster	49 (23.3%)
Size of Largest Cluster	83 (39.5%)
Ratio of Sizes: Largest Cluster to Smallest Cluster	1.69

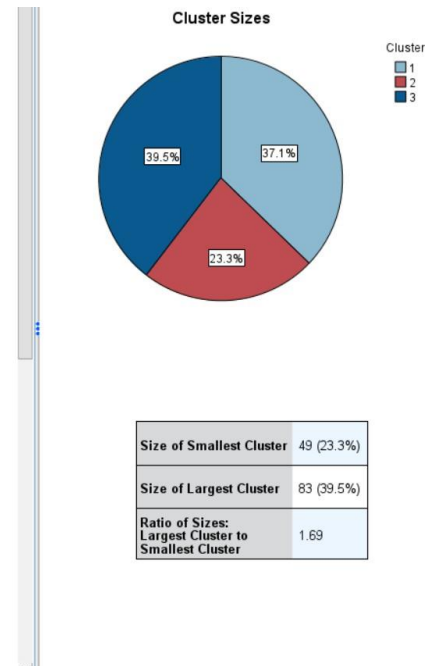
Cluster Analysis using SPSS – 3 clusters

Clusters

Input (Predictor) Importance

1.0 0.8 0.6 0.4 0.2 0.0

Cluster	3	1	2
Label			
Description			
Size	39.5% (83)	37.1% (78)	23.3% (49)
Inputs	<p>The food is a good way for the money</p> <p>The quality of food is excellent</p> <p>The food is tasty and flavorful</p> <p>The food is served hot</p> <p>The food is fresh Neutral (31.3%)</p> <p>7.What is food preference at KFC?</p>	<p>The food is a good way for the money</p> <p>The quality of food is excellent</p> <p>The food is tasty and flavorful</p> <p>The food is served hot</p> <p>The food is fresh Agree (53.8%)</p> <p>7.What is food preference at KFC?</p>	<p>The food is a good way for the money</p> <p>The quality of food is excellent</p> <p>The food is tasty and flavorful</p> <p>The food is served hot</p> <p>The food is fresh Agree (55.1%)</p> <p>7.What is food preference at KFC?</p>



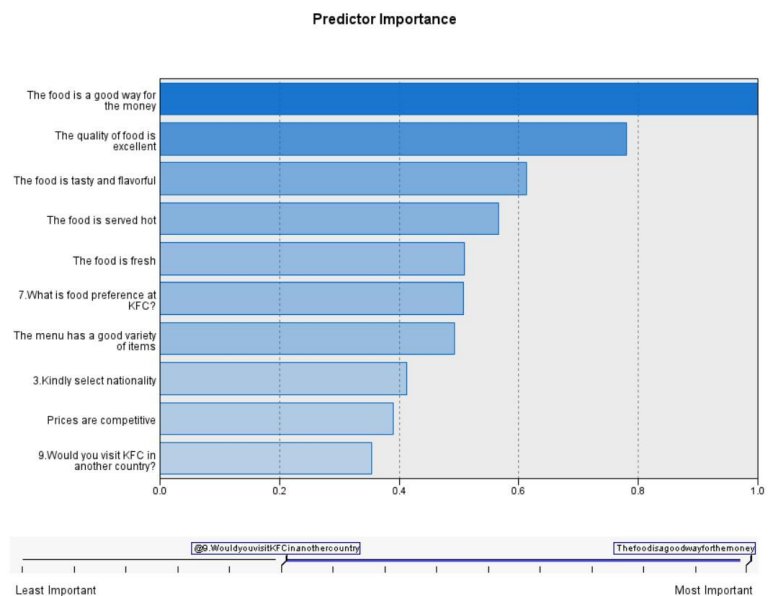
Predictor Importance

Clusters

Input (Predictor) Importance

1.0 0.8 0.6 0.4 0.2 0.0

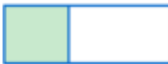


Cluster	3	1	2
Label			
Description			
Size	39.5% (83)	37.1% (78)	23.3% (49)
Inputs	<p>The food is a good way for the money</p> <p>The quality of food is excellent</p> <p>The food is tasty and flavorful</p> <p>The food is served hot</p> <p>The food is fresh Neutral (31.3%)</p> <p>7.What is food preference at KFC?</p>	<p>The food is a good way for the money</p> <p>The quality of food is excellent</p> <p>The food is tasty and flavorful</p> <p>The food is served hot</p> <p>The food is fresh Agree (53.8%)</p> <p>7.What is food preference at KFC?</p>	<p>The food is a good way for the money</p> <p>The quality of food is excellent</p> <p>The food is tasty and flavorful</p> <p>The food is served hot</p> <p>The food is fresh Agree (55.1%)</p> <p>7.What is food preference at KFC?</p>



Clusters

Input (Predictor) Importance

1.0 0.8 0.6 0.4 0.2 0.0

Cluster	3	1	2
Label			
Description			
Size	 39.5% (83)	 37.1% (78)	 23.3% (49)
Inputs	The food is a good way for the money Disagree (43.4%)	The food is a good way for the money Agree (82.1%)	The food is a good way for the money Neutral (40.8%)
	The quality of food is excellent Neutral (41.0%)	The quality of food is excellent Agree (50.0%)	The quality of food is excellent Agree (46.9%)
	The food is tasty and flavorful Neutral (43.4%)	The food is tasty and flavorful Agree (64.1%)	The food is tasty and flavorful Neutral (32.7%)
	The food is served hot Disagree (32.5%)	The food is served hot Agree (66.7%)	The food is served hot Neutral (34.7%)
	The food is fresh Neutral (31.3%)	The food is fresh Agree (53.8%)	The food is fresh Agree (55.1%)
	7.What is food preference at KFC? Beef (25.3%)	7.What is food preference at KFC? Chicken (64.1%)	7.What is food preference at KFC? Chicken (22.4%)

The menu has a good variety of items Disagree (36.1%)	The menu has a good variety of items Agree (67.9%)	The menu has a good variety of items Agree (55.1%)
3.Kindly select nationality French (31.3%)	3.Kindly select nationality Chinese (42.3%)	3.Kindly select nationality French (63.3%)
Prices are competitive Agree (36.1%)	Prices are competitive Agree (67.9%)	Prices are competitive Agree (46.9%)
9.Would you visit KFC in another country? No (47.0%)	9.Would you visit KFC in another country? Yes (62.8%)	9.Would you visit KFC in another country? Maybe (44.9%)
10.What would be your second preference of fast-food? Pizza Hut (19.3%)	10.What would be your second preference of fast-food? McDonalds (39.7%)	10.What would be your second preference of fast-food? Burger King (30.6%)
2.Kindly share your gender? Female (51.8%)	2.Kindly share your gender? Female (52.6%)	2.Kindly share your gender? Female (59.2%)
8.Please rate your overall satisfaction with our restaurant service: Satisfied (37.3%)	8.Please rate your overall satisfaction with our restaurant service: Satisfied (37.2%)	8.Please rate your overall satisfaction with our restaurant service: Satisfied (36.7%)
1.What is your age group? 21-30 (44.6%)	1.What is your age group? 21-30 (33.3%)	1.What is your age group? 21-30 (57.1%)
4.How often do you visit KFC? Weekly (43.4%)	4.How often do you visit KFC? Monthly (53.8%)	4.How often do you visit KFC? Monthly (55.1%)

c). Make general comment regarding the results of cluster analysis of the customers in such a way that customers with similar buying patterns are in the same cluster.

Cluster 1 – Chinese Women in the age group of 21-30 who prefer monthly visits. They prefer Chicken . They agree that food is tasty,served hot, with excellent quality and freshness.Their second preference is McDonalds. They prefer to visit KFC in other countries too.

Cluster 2 – French Women who finds the food quality excellent and food is served fresh, has variety with competitive prices. Food preference is Chicken and they belong to age group 21-30 . They prefer monthly visit.

Cluster 3 – French women in the age range of 21-30 visits KFC weekly and finds the service satisfied but is neutral overall considering the other factors. Prices are competitive for them and they do not prefer visiting KFC in any other country. They do not find the food has variety and they have the opinion that food is not served hot. Food preference is Beef.