Segmenting the Smartwatch Market: Solution

Overview: SmartWatch performed cluster analysis to perform an industry segmentation in order to identify various subsamples of dentists who are homogeneous in their behaviors and preferences and markedly different from other subsamples. Use the dataset 'SmartWatch Case Data file.xlsm' to perform cluster analysis. The SAS (SmartWatch Case SAS Code.SAS) and the R(SmartWatch Case Output R Code.R) output file can be obtained to see the results presented. The results of the cluster analysis are described as follows.

Figure 1 – SmartWatch

Pixabay Smartwatch Gadget

Question 1: Determine the number of distinct segments present in the market as represented in the current respondent sample.

Answer: The Elbow curve of the segmentation results (Figure 1) shows the loss of information associated with grouping the data into different numbers of clusters. In this case, the optimal number of clusters is 3 since the loss of information decreases as the cluster size continues to increase.

Figure 2 – Elbow Plot

Optimal number of clusters
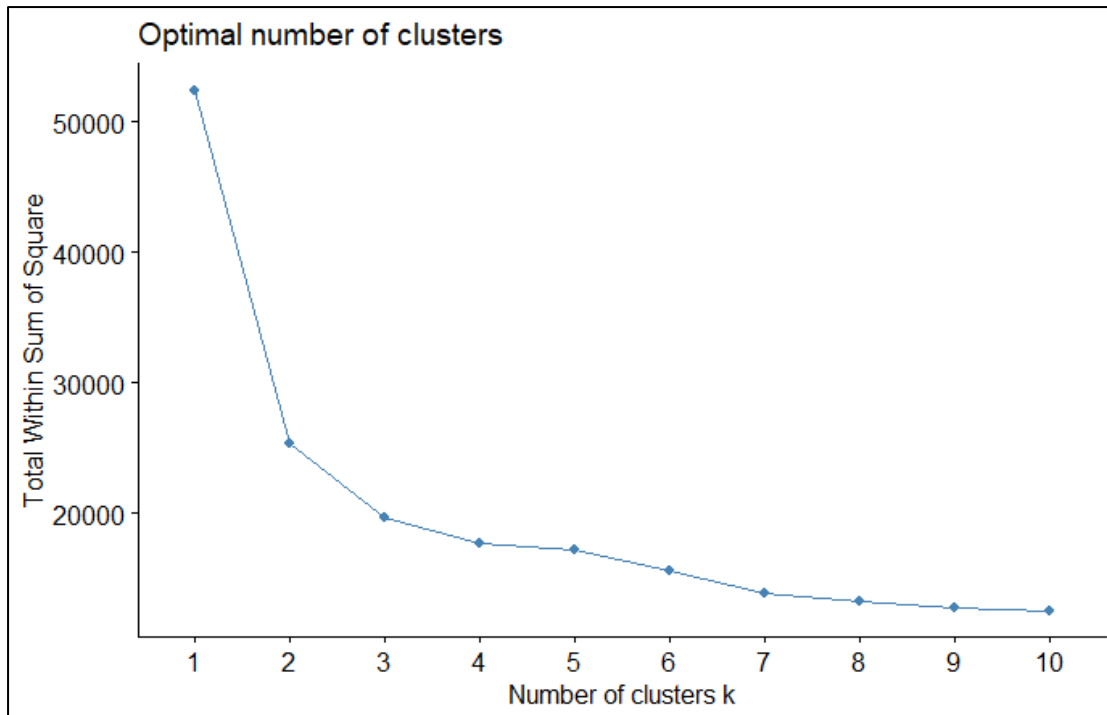
Question 2: After determining the number of segments, describe each using the segmentation and descriptor variables. Based on the characteristics, create a name for each segment that captures the essence of what makes it unique.

Answer: Having grouped all the customers into one of three clusters, SmartWatch can profile each cluster. By profiling, we mean that SmartWatch attempts to create a "picture" of the members of the clusters using all the variables of interest. The profile of each cluster is best seen by the variable means in Table 1 below. Next, we describe each of the clusters.

Cluster 1 – Younger Metropolitans (32.1%): This cluster has the highest interest in constant communication (5.02), timely information (4.46), and task management (4.67). The consumers have a moderate inclination towards well-being (5.01), athletics (3.99), and style (4.67). This is the most educated cluster (1.41) with moderately high income (3.47) and middle-age group (33.97). Based on the members being young, highly educated and high-income, along with their interest in wellness, we call them the "Young Metropolitans".

Cluster/Segment 2 – Older Metropolitans: This cluster has approximately the same number of males and females (0.51) and has the lowest income (3.06) out of all the clusters. They are generally not interested in features and have the lowest need for constant communication (4.45), task management (3.81), device sturdiness (3.58), well-being (3.38), athlete (2.86), and style (3.7). Very few in this cluster have an Amazon Prime account (0.45). Based on their age

(Average age of 34 years), income, and their indifferent attitude towards all the qualities of SmartWatch, we call them the "Older Metropolitans".

Cluster/Segment 3 – In Vogue (Females): This cluster is basically defined by females (0.7) who care about well-being (5.5), athlete (5.57), and style (5.02). Most of the females have an Amazon Prime account (0.75). The group is indifferent towards constant communication (4.7), timely information (4.09), and task management (4.29). Females in this cluster are very young (average age of 26 years), and we therefore name this cluster "In Vogue (Females)".

The cluster analytics exercise should enable Intel to obtain a better grip of the current preferences for smartwatches in the market by better understanding the needs of its customers and decide what attributes to emphasize in its own smartwatch. Specifically:

1   The market serves three types of customers who differ in their needs and preferences for products, as well as in their age-group, income, and education level.
2   The market captures a strong majority from Older Metropolitans, making up 46% of the market, followed by Young Metropolitans, making up about 32% of the market. The least concentration, about 21%, is towards Females In Vogue, which could be a potential target market for SmartWatch.
3   Intel could potentially start with two SmartWatches–one for Metropolitans and the other for women in Vogue.

Table 1 Cluster Analysis Results

Cluster Name	Younger Metropolitans	In Vogue (Females)	Older Metropolitans
Size of Each Cluster	**321**	**218**	**461**
Segment Size	**32.1%**	**21.8%**	**46.1%**
Constant communication	**5.02**	4.70	4.45
Timely information	**4.46**	4.09	4.26
Task management	**4.67**	4.29	3.81
Device sturdiness	3.82	**4.42**	3.58
Well-being	5.01	**5.5**	3.38
Athlete	3.99	**5.57**	2.86
Style	4.67	**5.02**	3.7
Amazon Prime	0.6	0.75	0.45
Age	33.97	26.76	40.73
Gender	0.56	**0.7**	0.51
Education Level	**1.41**	1.29	1.29
Income	**3.47**	**3.52**	3.06