Chapter 79
A Novel Approach to Segmentation Using Customer Locations Data and Intelligent Techniques

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ABSTRACT

Customer segmentation has been one of hottest topics of marketing efforts. The traditional sources of data used for segmentation are demographics, monetary value of transactions, types of product/service selected. Today, data gathered by location based services can also be used for customer segmentation. In this chapter a real world case study is summarized and the initial segmentation results are presented. As the application, data gathered from beacons sited in 4000 locations and Fuzzy c-means clustering algorithm are used. The steps of the application are as follows: (1) Categorization of the shops, (2) Summarization of the location data, (3) Applying fuzzy clustering technique, (4) Analyzing the results and profiling. Results show that customers' location data can provide a new perspective to customer segmentation.

INTRODUCTION

Customer segmentation could be explained as the process of distinguishing customers into diversified, meaningful, and homogeneous subgroups according to various properties. In marketing domain, it is basically utilized for understanding the customers and build differentiated strategies, services, and products customized to their characteristics. Wind and Bell (2007), state that effective marketing and business strategy necessitate a disintegration of the market into corresponding segments, a comprehension of the needs and desires of these segments, the design and implementation of products and services that satisfy those needs and enhancement of marketing directions to effectively reach the target segments. Different segmentation types are appeared according to the segmentation criteria used but conventionally the organizations generally use demographics based segmentation and value based segmentation. In particular, customers can be divided into subgroups according to their sociodemographic and personal information, and their behavioral wishes and loyalty specialties (Tsiptsis & Chorianopoulos, 2009).

Cravens and Piercy (2012) investigate segmentation as operating at three decision-making levels. At the strategic level, strategic segmentation is used to associate the administrative vision and strategic plans and emphasize product yields according to diversified rangers of buyers. At the managerial level, segmentation is dealing with assigning resources with respect to segment targets, involving them in marketing provisions, and composing organizational processes considering them. And finally at the operational level, segmentation problems that are related with the marketing provisions are necessitated to have available segment goals with advertising and promotions, and evaluated with delivery systems.

As one of the basic field of marketing activities, customer segmentation has taken a great attention due to the fierce global competition and rapid changes in information and mobile technologies. Appropriately constructed customer segmentation ensures companies to capture individual customers' special requests and preferences which could enlarge customer faith and attraction and gain invaluable advantages related to competiveness in the market. At this point, data analysis for customer segmentation requires well-organized information system infrastructure for handling updated customer needs and enable superiority on providing these needs in a rapid way. In this regard, customer segmentation based on the preferences of customers in terms of grouping these customers considering similarities has become vital.

Tsiptsis and Chorianopoulos (2009) explain various usage fields of segmentation in marketing; one could be the better realization of customers that provide the specification of latest marketing opportunities. Secondly, the process of new product or services design, development and product ranges formed to each segment's properties instead of the mass market are the other inferences of segmentation. For this purpose, customized product design suggests strategies related to available customers with respect to each segment's identified wants and needs should be clearly understood. Offering tailored rewards and incentives is another aspect for the purpose of segmentation. Evaluating and choosing the proper advertising and communication message and channels and electing the appropriate sales and service channel could be the other aim for clustering customers. Note that designating the brand image and the critical product yields to be touched with the specific properties of each segment and fractionations in customer service considering each segment's significant are essential issues for selecting appropriate resource allocation according to the potential value gathered from each division. Finally, prioritization of the marketing interferences which intend customer dependence and improvement according to each segment's significance and value, is invaluable aspect for grouping customers.

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