

# Using Data Analysis To Provide Segmentation And Personalized Service Use In The Entertainment Industry

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## Abstract

**Background:** As more and more products of the same type become more and more competitive in the industry, merchants constantly put forward different types of services, including customer segmentation and personalization.

**The aim of this study:** This study proved the feasibility of personalized service in the entertainment industry and even the service industry, and to provide some new ideas for operators.

**Methods:** This study cited some previous studies to prove the rationality of using data analysis in personalized service in the entertainment industry of art, sports and film and television industry, and also provided some feasible ideas for merchants, and additional data to illustrate the rationality. Also mentioned some technology methods like The Linguistic Inquiry and Word Count (LIWC) software.

**Results:** Data analytics can make personalized service more efficient and capable, and businesses need to have some dimension to measure customers. The emergence of personalized service can bring stronger vitality to the industry.

**Conclusion:** Personalized service will undoubtedly take marketing capabilities and customer experience to the next level. At the same time, the ability of data analysis and how to classify and numeralize customer needs have also become a problem that we need to study.

**Key words:** personalization, customer segmentation, data analysis, marketing strategy, entertainment industry.

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# 1 Introduction

As technological and scientific advances advance and information proliferates, the amount of information accessible grows. People are becoming more interested in customised items as their level of consumption rises. Data analytics is being used by more and more businesses to offer customised services that cater to client demands.

Customer segmentation is the process of separating a market into distinct categories of consumers with different needs, characteristics, or behaviours. These consumers may need different products or may react differently to different marketing strategies [1]. It is also frequently viewed as a tool with limitless potential that may help businesses promote their goods and create new ones more successfully [2].

A crucial element of an interactive marketing approach is personalization. Its goal is to customize a standardized good or service to meet the demands of a specific client [3].

This article focuses on this issue for the entertainment sector. The findings demonstrate how text data may be utilized to create quantifiable market categories to design focused strategies [4] by evaluating qualitative data gathered from semi-structured interviews with art collectors. Data may also show how well theory-guided models for creating consumer-based micro-segmentation tactics work in the sports industry. Marketers may categorize customers into the casual, medium, and loyalty sectors using data used to evaluate people and make educated judgments regarding promotional content and channel distribution [5].

The film and television industries is used as an example in this article. There are several marketing tactics that use data analysis to segment and personalize consumer bases. Buzz marketing is one such advertising strategy that draws people to cinemas by cutting through the everyday noise and clutter and grabbing their attention to the point where discussing a movie becomes a fun experience to share [6]. The second is the more typical price bundle, in which producers and merchants frequently provide a number of items for a single bundle cost. To decrease the possibility that customers would purchase paid services (such as theatrical performances), building on the sunk cost literature (e. g. Thaler 1980, 1985). Some results of the study have practical implications for managers who intend to predict or influence actual product consumption, and also illustrate how price bundling affects consumption decisions.

Advertising is a key factor in enhancing any company's success. It acts as a catalyst for growth for any company and is an efficient way to spread awareness of your brand and keep customers interested [7]. The results demonstrate that producers frequently have a tendency to use their authority and ideology to alter people's behaviour and beliefs by thoroughly evaluating texts and pictures and placing them in relationships with sociocultural processes and changes that can be extensively analyzed [8]. Studies have shown, in accordance with the theoretical underpinnings of the advertising value model, that there are notable differences in the development of advertising value and the formation of favourable attitudes toward advertising when product-related information is developed by these three different groups [9].

It is clear that the cultural sector may greatly benefit from the use of data analysis for client segmentation and personalisation in marketing tactics. Businesses should seize this excellent opportunity.

Since it is clear from prior applications that offering suitable individualized service is crucial in marketing, we will discuss customer segmentation and personalization in-depth in this article. This essay will demonstrate the value of personalisation using the more traditional entertainment business, and it will also suggest some flexible marketing tactics.

## **2 CUSTOMER SEGMENTATION AND PERSONALIZATION**

As for Customer segmentation and personalization, many writers have different definitions. This chapter picks out the most representative definitions and introduces some other concepts to facilitate subsequent understanding.

### **2.1 Customer segmentation**

There is a lot of literature that defines customer segmentation in much the same way. The industry landscape is constantly changing under the fierce competition. Customer segmentation means that sellers classify groups with similar characteristics or characteristics into one category by analyzing customers' behaviours and needs [10].

Customer behaviour and value analysis determines customer segmentation. In the context of

the continuous development of media such as the Internet, customers are now increasingly able to fully realize their needs. Change in customers' buying behaviour is critical to assessing their future behaviour. There is an important analysis structure in this system: customer value analysis. It uses endless data sources to summarize the laws of customer behaviour and has the ability to speculate. Kotler(2001) defined customer value as net present value profit [11]. Hwang et al.(2004) described it as the total revenue of customers in the whole transformation process [12].

Therefore, customer value is based on existing and expected profits and probability of churn [13]. This is the same as customer relationship management (CRM), which is a "management benefit of managing interactions with customers seeking to understand the company through a combination of business processes and technology" [14] . The main mission of CRM activities is realizing the profitability of customers and retaining profitable ones [15] . At the same time, this can also serve as the basis for customer segmentation, and several segments can be formed according to customer profitability. For example, a segment consisting of the most profitable customers should support their continued consumption through loyalty and retention programs. Another segment of the market, customer groups that generate more costs than profits, is the least profitable, but it also means that companies have defined their value, which is debatable.

In terms of the benefits it brings, businesses are increasingly aware of the many potential benefits of this model. For example, customer retention and loyalty can be increased by creating value for customers, providing customized, efficient and high-quality products and services, and improving customer value [16] .

## **2.2 Personalization**

There are many different entities that have different definitions of personalization. Personalization Consortium(2005) believes that personalization is the use of technology and customer data to personalize the e-commerce interaction between enterprises and individuals [17].

Without this information, there will be some problems in the interaction. The advantage of personalization for both buyers and sellers is that they can say some topics that are more interesting to each other, so as to improve the satisfaction and efficiency of services and transactions. There are many types of personalization. Vesanen, J.(2007) proposed to divide them into segmented market-

ing, adaptive personalization, cosmetic personalization, transparent personalization, and collaborative customization. He believed that different types of personalization have differences in learning opportunities, customer communication, display changes, and product types [18]. The ability to integrate input from different sources is important for process implementation [19].

Personalization sometimes means that enterprises and businesses have a positioning for themselves, which means that for customers, there is a better experience and greater value. But at the same time, personalization as a kind of activity management, it also needs a huge amount of data and a huge amount of financial support, which means that it is not a simple matter [20].

Vesanen, J. (2007) also described the difference between personalization and customization in their paper. Some people think that personalization includes customization and is a part of it, while others think that customization is a more advanced form of individuation and deeper than it, while others think that it is meaningless to distinguish them.

### **3 MARKETING STRATEGIES**

As mentioned in the introduction, this paper mainly introduces the entertainment industry, and some of its marketing strategies need to be described by principles and mathematical analysis.

The first is some general methods such as decision tree, which is involved in predicting industry trends in all walks of life. On the surface, it is a radial mind map, but in fact, the probability of every event need data support and data analysis to calculate. loyalty is also an important part of the brand. Membership policies can effectively encourage customers to continue to buy the supplier's services. Discounts are also an incentive for consumers, as is the "trade-in policy". In addition, targeting their projects and products to specific groups of people is also a very effective strategy, which requires "customer segmentation", and more targeted strategies can let specific audiences be attracted, which is a form of "personalization" [16].

For some special industries, we can easily understand some special marketing strategies. These strategies can be used by different industries after processing. For the application of these strategies, we'll look at the fashion, sports and film industries next. And from the following we can see that these strategies can be explained by data analysis, which is why the profiteers do it.

Bundling is a marketing strategy worth talking about, and it fits in well with this theme.

Combining complimentary goods and services is a classic marketing tactic, but pricing these combinations is still quite difficult. Numerous factors need to be taken into account by businesses, such as segmented client demands, the price of particular items, and the fact that customers have many options.

Companies may increase their marketing power by bundling and suppliers can obtain the best price since the cross-elasticity of demand for complementary items is negative, which means that demand for one complementary good generates demand for another complimentary good.

By comparing the models of bundled consumption and unbundled consumption, some people found that enterprises can formulate more optimized pricing through bundled consumption, which is conducive to improving profit margins, which is also a kind of personalization in a sense. But it also turns out that getting this ideal pricing requires strong theoretical support.

## **4 APPLICATION OF MARKETING STRATEGIES**

### **4.1 Fashion & Art Marketing Strategies**

The order of the fashion and art industry is typical, with suppliers having a strong sense of finding the right buyer. Although the study's context is consumer art collecting, the approach used is applicable to most other high-involvement buying and consuming scenarios [21]. This article fills that need by defining personality qualities: the "Big Five" personality traits of art collectors, as well as homogeneous developmental groupings, categories, or clusters. This not only contributes to a more sophisticated perspective, but also has some practical ramifications in art collecting writing.

The "Big Five" personality qualities of art collectors are described in the following research. It describes a research in which extensive-depth recorded discussions with art collectors were undertaken. Data from Watson's Individuality Insights service for automation analysis of texts is then utilized in mapping and clustering systems to discover homogenous groups of consumers that have common personality characteristics.

According to the findings, Open Introverts (mean=45.9) employed much more analytical lan-

guage than the other segments ( $F(3,24)=9.562$ ,  $p=0.001$ ), notably Closed Introverts (mean=16.1). Closed Extroverts (mean=47.0) and Open Introverts (mean=45.5) employed much more powerful language ( $F(3,24)=7.375$ ,  $p=0.001$ ) than the other two groups, particularly Agreeable Introverts (mean=17.0). Open Introverts (mean=30.6) and Agreeable Introverts (mean=78.4) used considerably more honest language than the remaining segments ( $F(3,24)=9.232$ ,  $p=0.001$ ). Individuals in all segments, not unexpectedly, adopted a rather positive tone in their interviews to discuss their fine art collecting activity ( $F(3,24)=0.950$ ,  $p=0.435$ ), and there were not any statistically significant differences across segments on the tone dimension. We can see it more clear in the table I below:

Variable	Mean	SD	Open introverts	average Joes	Closed Extroverts	Agreeable Introverts	F(3,24)	pValue	
Analytic	26.0	12.08	45.9	28.4	16.1	21.4	9.552	$p<0.001$	
Clout	35.8	14.60	45.5	33.0	47.0	17.0	7.375	0.001	<b>Table I</b>
Authentic	55.6	17.84	30.6	58.3	49.0	78.4	9.232	$p<0.001$	Psycholinguistic characteristics
Tone	78	10.27	81.6	74.1	80.5	81.5	0.950	0.001	of fine art consumer segments

The results indicate that the "typical" art collector is extremely sentimental and affable, but less diligent, less receptive to new things, and more introverted than extroverted. It deviates from the stereotype of art collectors, especially in terms of their propensity to be open to new experiences. The results also showed some relationships between different personality characteristics.

These research suggest that all artists may be divided into four different types of art enthusiasts. This classification is able to be utilized to divide the art market into distinct segments, explain each recognized distinctive consumer category, and develop effective marketing and targeting strategies. Additionally, by presenting managers with a novel, inventive method for market segmentation, this research broadens the toolkits of practitioners. Although the focus is on the personality of the art collector as described by the "Big Five" characteristics, the tools used here can be applied to any textual corpus, including the vocabulary of individuals and groups in society, business, community leaders, and politicians, to identify the principles, requirements, personality, general mood of the individual, and the emotions conveyed through the text in discussion or at work. As a result, decision-makers are better able to understand these issues and, ideally, produce more effective strategies or guidelines as a result [4].

## 4.2 Sports Marketing Strategies

The entire three-level procedure for creating a sports marketing plan is explained by the authors: diagnosis: factors influencing fan behavior and SWOT analyses to diagnose the actual situation; (ii) The most crucial one: Fans: it includes marketing plan goals and objectives, selecting and establishing the target customer-fan audience, positioning the brand's value position on the market, and (iii) Sports Marketing Mix: information about sponsors. The second section deals with customer segmentation, which helps identify the target market and determines their own distinct positioning for the purpose of successfully implementing the following marketing plan. In this way, sports marketing may be viewed as a philosophy based on a business strategy that includes routine, a set of basic norms and principles, and instruments for managing client relationships [22]. Sports marketing is just another form of conventional marketing. For instance, it might be challenging to forecast trends for sports items since they are frequently very variable and unexpected [22].

According to Clark (2011), in the field of sports, marketing has always been considered to see the communication process and relationship between sports clubs and fans changed by the original form of sports clubs, competitions and players, because of the need to consider the perspective of customer needs [23]. Obviously, sports marketers serve fans and must identify which needs and desires they want to be met during their communication with them. Understanding fans as customers is the initial difficulties because this is the act of obtaining the desired item (a match, event, product, etc.) from the athletic organization in exchange for passion, enthusiasm, energy, and money. Another inherent challenge in the early stages of the marketing process is determining the needs of various fan groups.

The idea of sports marketing is a crucial component of global sports innovation, which is connected to the growth and preservation of businesses like club enterprises. Through their global marketing initiatives, several sports teams assist business sponsors all over the world [24] so they may profit from one another.

From McDonald's sponsorship of the FIFA World Cup to Nike's relationships with multiple sports clubs, athletes, and events, to Coca-Cola's sponsorship of the Olympics, the fast food, sports, and beverage companies all give major financial assistance to the sports business. Sporting events



are important sources of financing for athletes, entities, and events. The Nike contract is worth over \$1 billion throughout Cristiano Ronaldo's lifetime, and modest sponsorships may be quite lucrative. Sports sponsorships help brands enhance brand recognition, develop brand image, and establish relationships with sports fans. Because this interaction may be thought of as an exchange process, Bernstein (2015) said that sports marketing management must be able to offer goods to both parties [25]. Another issue is that people frequently have both favorable and negative opinions about certain aspects of sporting goods. Manufacturers are frequently regarded as the product experts in a corporate setting. Customers believe they are professionals in the sport, nevertheless.

### **4.3 Media Marketing Strategies**

The aforementioned evidence shows how efficient client segmentation and personalisation are in the arts and sports. Businesses in the media sector carry out similar activities. But certain marketing techniques might be helpful for the media sector. I'll discuss the buzz approach, a marketing tactic that also highlights the value of data analytics in terms of consumer segmentation and personalized service.

Word-of-mouth marketing is a type of advertising that relies on this method of persuading individuals to change their friends' attitudes or behaviours. It becomes a delightful sharing experience when information about a product or brand that is intriguing, engaging, newsworthy, or simply drastically different from the standard is used to inspire people to speak, share, and spread. However, for this to occur, there must be some intriguing, witty, fascinating, captivating, or engaging content in order for word of mouth to travel fast and create a "buzz" [6].

Buzz marketing is a type of advertising that focuses on using technology, such as social media platforms and private chats, to spread the word about a product or phenomena on a broad scale. Experts or clientele with strong connections who others rely on may participate in these talks. Buzz marketing has a broader audience in mind as compared to conventional marketing operations. Similar to traditional marketing, which targets consumers through various media, buzz marketing involves delivering an amazing message to the target audience that is so fascinating and thrilling that it spreads like wildfire. The attraction component of excitement, according to Mohr (2007), is essential to buzz marketing since it is the character of the message that motivates individuals to

spread it to others.

Those who disseminate the buzz may or may not be specialists; they are doing so about a variety of topics that marketers and the media have presented. In contrast to word of mouth, where opinion leaders are self-motivated due of their familiarity with the brand. In order for word-of-mouth marketing to be effective, technology is essential for the viral dissemination of brand messaging. The phrases word-of-mouth and viral marketing are sometimes used interchangeably.

This type of marketing strategy, as Chen Z noted, is closely connected to new technologies [26]. According to studies, remarks written on mobile devices are more emotionally charged than those written on computers. Here, LIWC measures are also applied. He asked participants to rate their feelings on a scale of 1 to 7 for "happiness," "delight," "positive emotions," "anger," "disappointment," and "negative emotions, EITHER positive OR negative." Three positive emotions and three negative emotions (coded in reverse) were averaged into a single six-item "perceived emotion" index (0.87), with a lower score indicating a stronger negative emotion and a higher score indicating a stronger positive emotion. The perceived emotion index was positively correlated with the overall emotion score of LIWC ( $r=0.417$ ,  $p < 0.001$ ), and negatively correlated with the LIWC negative emotion score ( $r=0.422$ ,  $p < 0.001$ ), and negatively correlated with the LIWC negative emotion score ( $r=0.421$ ,  $p < 0.001$ ). These results suggest that the emotional content detected through automated measurements is also perceptible to human judges reading the comments [27].

## **5 DISCUSSION**

This study uses some case studies to support and prove the feasibility of personalized service in the entertainment industry and even the entire service industry. In the entertainment industry such as art, sports, film and television, data analysis can make personalized service have better service value and make customers more valuable and attractive.

This study also provides some meaningful marketing strategies, which are based on some technical methods, and these methods are also introduced in the study. Such as The Linguistic Inquiry and Word Count (LIWC) software, businesses can need to classify and digitize customer needs according to the type of product they offer.

The idea that data analytics may lead to individualized services is widely held. Habegger (2014), for instance, examines the difficulties in developing systems that demand both deep customisation and a high level of user privacy. Users may find personalized systems to be of great benefit. When making tailored suggestions for long-tail material, this is particularly true. According to him, this personalisation has been made possible by big data analytics technologies [28]. In addition to the entertainment industry mentioned in this study, in the medical industry, personalized methods can also be proposed based on big data analysis to personalize the results of patients' standard treatment plans [29]. These are examples of how data analytics can make personalized services better suited to consumer needs, regardless of industry.

However, as mentioned above, merchants need to classify and digitize customer needs according to their own product types, which can cause some problems for us. It is difficult to capture the needs of all buyers in the imagination of businesses, and there will be some deviations when these are expressed in numerical terms. These biases may result from intentional or subconscious biases of the subjects, or from stereotypes of the experimenters. We still have a long way to go to make these biases affect the outcome as little as possible.

This study demonstrates that data analysis can lead to higher quality personalized services and provides some meaningful marketing strategies that companies can use to label their own product types. In the era of big data, AI treats human photos similarly to cookies, enabling more personalized services based on client preferences. Some companies are experimenting with face recognition to assess their clients' emotions and provide suitable product suggestions as a consequence [30] [31].

However, businesses need to classify and digitize customer needs according to their product types. What we need to do is to minimize the impact of these biases on the results, and we hope that there will be studies to promote research in this area.

## **6 CONCLUSION**

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