

Trends in Consumer Segmentation

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Abstract

This paper reviews academic and practitioner literature to identify some of the emerging trends in consumer segmentation. Our review suggests that a number of specialised segmentations have recently emerged, each utilising different techniques, methodologies and data inputs relevant to their respective strategic intent.

Introduction

The external environment is undergoing profound changes. The rise of new media alternatives, especially consumer generated media, such as social networks and product review sites, has provided consumers with unprecedented influence over the quantity and quality of content they access. The consumer's ability to exert control over communications channels has changed the interface between organisations and the market. Shifting power relations have major implications for consumer expectations, purchasing decision-making, distribution, concepts of customer value and the way that business is transacted.

Increasing market fragmentation, heterogeneity of demand and the rise of knowledgeable sophisticated consumers who want to be treated individually have been well documented (Firat and Shultz, 1997; Hart, 1995; Proctor and Kitchen, 2002). To cope with individualised demands, marketers are leveraging new interactive communications to reach individual customers with customised offerings and develop tailored marketing programs in a process known as mass-customisation (Bardakci and Whitelock, 2005; Hart, 1995).

Interactive communications channels are more than just a means of delivering promotional messages. Interactivity allows for two-way, real-time dialogue between marketers and consumers. Interactive audiences leave behind valuable transaction histories which can be used to enrich our understanding of market behaviour. By mining this rich data resource, marketers can improve market responsiveness (Maclaran and Catterall, 2002; Richardson-Bareham, 2004). The sheer volume of dynamically generated data available is likely to have a profound impact on segmentation and profiling activities.

Market Segmentation: An Overview

Market segmentation was pioneered by brand marketers in the mid twentieth century in response to the availability of data. Demographic and purchasing data was available for groups but rarely for individuals. Similarly, advertising and distribution channels were available for groups, but rarely for single consumers.

Wind (1978) identifies four basic approaches to segmentation; two traditional methods (a-priori and post hoc) and two flexible methods (dynamic and componential). Since this typology was proposed, a more recent class of techniques has been developed. During the 1990s, researchers developed methods that combine competitive market structure (CMS) with segmentation methods. These methods have been frequently cited in the literature and only a brief outline will be provided here (Allenby, *et al.*, 2002; Tynan and Drayton, 1987).

Traditional a-priori and post hoc methods differ with respect to the selection of an appropriate base. A-priori methods require the analyst to select of a base for segmentation prior to analysis while post-hoc methods form a base for segmentation after analysis (Hoek, *et al.*, 1998; Tynan and Drayton, 1987; Wind, 1978). A wide range of techniques are available including cluster analysis, factor analysis and discriminant analysis although most commercial segmentation studies rely on cluster analysis (Hoek, Gendall and Esslemont, 1998). Dynamic segmentation, a flexible approach, analyses consumer responses to the attributes of test products and typically relies on some type of choice modelling in simulated conditions (Roberts, 2000; Tynan and Drayton, 1987; Wind, 1978). Componential segmentation, an extension of dynamic, shifts the emphasis away from partitioning and onto prediction (Green, 1979; Moore, 1980). Multidimensional scaling or hierarchical clustering techniques are favoured by these predictive approaches. Finally, a number of new approaches combining CMS with segmentation have been developed. Frequently involving both explanatory and predictive components (Elrod, *et al.*, 2002; Reutterer and Natter, 2000; Russell, *et al.*, 1999), these methods variously employ self organising maps (SOM), fuzzy clustering, typology representing networks and latent class techniques to reveal inherent market structures and segments (Reutterer and Natter, 2000). Further investigation into the robustness of these techniques is required.

Segmentation's primary purpose has been to identify segments that differ in their purchasing power, aspirations and market behaviour (Allenby, Fennell, Bemmaor, Bhargava, Christen, Dawley, Dickson, Edwards, Garratt, Ginter, Sawyer, Staelin and Yang, 2002; Hoek, Gendall and Esslemont, 1998; Yankelovich and Meer, 2006). Most segmentation studies rely on one-off data collection, in which respondents' self reported statements form the core data set (Hoek, Gendall and Esslemont, 1998; Wind, 1978). Typical data inputs consist of purchasing, consumption or attitudes towards the brand suggesting that the brand remains the primary unit of analysis (Dibb, 2002; Hammond, *et al.*, 1996). As such, most segmentation studies address immediate short-term questions; typically the "market served" and are used to inform operational marketing decisions. In short, traditional segmentation has been a tactical, brand-driven process.

Traditional segmentation's limitations have been well documented in the literature. Perennial criticisms are that segmentation fails to identify sufficiently narrow clusters (Bardakci and Whitelock, 2003; Kara and Kaynak, 1997) and that bases used are overly descriptive, and lack insights about motivations necessary to execute mass-customisation (Allenby, Fennell, Bemmaor, Bhargava, Christen, Dawley, Dickson, Edwards, Garratt, Ginter, Sawyer, Staelin and Yang, 2002; Hoffbrand, 2006; Smit and Niejens, 2000). Furthermore, the over-reliance on one-off surveys, rather than continuous ongoing data collection leads to associated difficulties with market dynamics (Hoek, Gendall and Esslemont, 1998; Kara and Kaynak, 1997; Wind, 1978). Specific dynamic issues include the instability of segments over time (Albaum and Hawkins, 1983; Blocker and Flint, 2007; Kara and Kaynak, 1997); fundamental structural change leading to segment creep and membership migration as individuals move from one segment to another (Board, 2004).

In spite of its limitations, segmentation remains an enduring concept in marketing and continues to be widely used in practice (Dibb, 2002; Kara and Kaynak, 1997; Tynan and Drayton, 1987). Yet, signs that segmentation is becoming increasingly specialised are evident. Researchers are leveraging new data sources and finding ways to redress some of traditional marketing's limitations.

Specialised Segmentations

Yankelovich (2006) has argued that segmentation used to develop advertising segmentation has evolved along different paths because of differences in their respective goals and purpose. Advertising's objective is to identify segments that vary in terms of their responses to a given message strategy. Accordingly, advertising practitioners value lifestyles, psychographics, benefit-sought or some type of hybrid of these bases (Smit and Niejens, 2000; Wind, 1978). Both quantitative and qualitative procedures, such as means-end and laddering methodologies are employed in analysis (Reynolds, 2006). Most full service advertising agencies have developed proprietary instruments and tools to carry out segmentation studies for clients.

Signs that direct marketing and customer relationship marketing are also evolving their own strands of segmentation are also evident. Direct marketing, for example, has developed its own frameworks including Recency, Frequency and Monetary RFM) and Customer Lifetime Value (CLV) (McCarty and Hastak, 2007; Reutterer, *et al.*, 2006). A variety of unique segmentation techniques based around extensive data mining and loyalty segments are employed (Story and Hess, 2006). Although, direct marketers internal records provide rich purchase-history data, Ruetterer et al (2006) points out that it is often analysed at an aggregate level for use in mailing lists with little differentiation across segments. A recent dynamic approach developed by Reutterer et al (2006) combines observed shopping baskets with prototypes in order to construct behaviourally persistent segments. This approach leverages the unique types of data available to direct marketers with the potential to evolve into distinctive specialised segmentation.

Tactical marketing and strategic marketing also appear to be diverging. Sausen et al (2005) have criticised the lack of research in strategic segmentation, attributing this to researchers' preoccupation with methodological questions. Traditional segmentation's focus on brands and current market served tends to overlook valuable segments. It fails to identify non-users, segments with unarticulated needs and those with unfulfilled needs (Yankelovich and Meer, 2006). Yet, these are precisely the segments that are of interest to strategic analysts. The ability to recognise market gaps created by unmet needs can lead to profound insights that enable marketers to find new market spaces (Kim-Chan and Mauborgne, 2005).

Rather than focus on current brand segments, strategic segmentation adopts a much broader perspective. Its focus is corporate and addresses longer term, big picture questions that confront businesses; questions about new product opportunities, new market spaces, new product development and competitive positioning (Hunt and Arnett, 2004; Sausen, *et al.*, 2005). Strategic segmentation is used to pinpoint the type of customers a business wants to encourage, what image or brand is needed to attract them, how much they are willing to pay and what type of products they will need and what internal capabilities are necessary to leverage market based opportunities. Strategic segments require distinct value networks or often require a completely different business model (Hermawan, 2006).

A number of new approaches designed to analyse competition, positioning and segmentation simultaneously have been developed. Given that most such methods rely on sales scan data to model market structures, they fail to reflect the full range of market response because they omit information from prospects who are non-customers (Allenby, Fennell, Bemmaor, Bhargava, Christen, Dawley, Dickson, Edwards, Garratt, Ginter, Sawyer, Staelin and Yang, 2002; Sausen, Tomczak and Herrman, 2005)

Finer and Hyper-segmentation

Finer segmentation defined as a more precise way to segment markets into narrow clusters, has been hypothesised since the early 1990s (Hamel and Prahalad, 1994; Kara and Kaynak, 1997). Finer segmentation requires extensive information flows, comprehensive databases and computerised manufacturing systems and integrated distribution (Kara and Kaynak, 1997). Advances in information technology have facilitated highly sophisticated segmentation where markets can be grouped into narrow clusters based on commitment to a product class or readiness to purchase a given brand. Insights gathered assist with segmentation and profiling, allowing decision-makers to identify early adopters (Kiani, 1998) identify cross-selling opportunities (Ackura and Srinivisan, 2005) and provide high relevant message strategies.

Two new segmentation methods, progressive profiling and addressable marketing, appear to have moved beyond finer segmentation, towards hyper-segmentation. The distinction is that finer segmentation identifies narrow groups while hyper-segmentation identifies a segment of an individual customer (Kara and Kaynak, 1997). These approaches leverage the volume of dynamically generated data, left behind each time a consumer uses a digital communications device. Both rely on interactive media to segment on observed behaviours and profile consumers in continuous, iterative manner, down to the level of a single customer.

Progressive profiling involves incremental data collection across sessions and interaction points typically online (Spethman, 1999). Interactive web sites allow marketers to identify preferences and behaviour at the level of a single customer. The process consists of “asking one or two questions per transaction [which] over time allows information which is desired, and still not known, to be asked at each subsequent transaction” (Market First, 2005). Progressive profiling therefore yields rich data that facilitates continual refinements to the marketing program as the consumer provides additional information about preferences. More importantly, progressive profiling provides marketers with the opportunity to probe for additional information as their relationship with the customer matures.

Addressable marketing exploits the potential of digital communications devices to gather information about online behaviours including site visitation, site engagement, content involvement and advertising exposure (Füller and Matzler, 2007). Decision makers use insights gained from dynamically generated data to segment markets and send highly targeted advertising messages or product offers (Gal-Or, *et al.*, 2006). It has been argued that addressable marketing is not an entirely new concept, the cost efficiency and speed of electronic data management allows greater flexibility and finer levels of segmentation than were previously feasible (Blattberg and Deighton, 1991). The primary application appears to be addressable advertising which collects data on the consumer’s program and advertising involvement from personal video recorders and video on demand to deliver highly targeted advertising messages to receptive audiences,

Hyper-segmentation leverages the power of interactive, real time communications to gather segment using observed behaviours, as distinct from self reported, recalled behaviours. Significantly, interactive environments allow marketers to collect dynamic information across multiple interactions. Thus, hyper-segmentation ameliorates some of traditional segmentation’s problems with segment stability.

Hyper-segmentation combines multiple segmentation variables in ways that have been elusive within traditional approaches. Observed behaviours include interests (domains accessed), diversity (visitation across different landscapes), motives (content involvement), loyalty

(frequency of visitation) geographics (IP addresses), fluidity (multiple time periods) and brand preferences (site-loyalty). Demographic and other more traditional data can be added via the audience member's self-reported registration details (Board, October, 2004).

Data is captured from electronic communications devices, mapped and logged with a management information system. Programmed business intelligence software is used to analyse the data and may also import additional inputs from other internal information networks. A key feature of these recent approaches to hyper-segmentation is that software vendors control the methodologies (Park and Kim, 2003) resulting in an conflicting array of proprietary technologies. For the marketer, however, a major advantage is the potential to make inferences about latent needs, which have proved to be very elusive in traditional segmentation studies. It has been argued that the ability to discover latent needs implies more proactive market orientation (Narver, *et al.*, 2004; Slater and Mohr, 2006).

Behavioural Based Targeting

Behavioural-Based Targeting (BBT) has been described as the “new killer application” (Klaassen, 2007). It turns traditional segmentation on its head, by adopting a process of market aggregation, rather than market partitioning. The process begins by identifying the online behaviour of a single individual, tracks that person's visitation patterns across the Internet, noting those sites with high concentrations of users with similar profiles (Song, 2007). BBT focuses on associations between the given target and web site populations, drawn from the entire online universe. BBT is built on an assumption that people with similar needs or interests visit similar web site and that web surfing behaviour will translate into purchasing.

BBT requires two types of data; a list of target users and site visitor sample populations. By comparing these, marketers can ascertain concentrations of users across web sites (Song, 2007). To date, the primary application for BBT is in behavioural-based media planning. Major Internet search engines including Google and Yahoo! are both active in this field as is the U.K's *Guardian* newspaper. Amazon is the most well known example of BBT outside the media industry.

Implications and Conclusion

Although emerging segmentations offer improved richness of data, trade-offs include the increasing complexity in processes and the potential for loss of control. These developments may require marketers to develop new competencies.

As marketing matures, it is likely that there will be an increase in the number of approaches to segmentation. A single marketer active in CRM, direct marketing and strategic planning could potentially have access to four independently conducted segmentation studies, each using different methodologies and different variables, giving rise to practical and computational problems linking multiple segmentation studies. Databases of online transaction histories are likely to become a more important resource in segmentation and profiling. Arguably this will impact on external relationships as marketers reduce their dependence on market research firms while increasing their reliance on IT services and proprietary software systems.

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