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Abstract

Purpose – The purpose of this paper is to present a multichannel segmentation approach to identifying customer segments based on actual customer channel usage in the post-purchase phase in the health insurance industry.

Design/methodology/approach – A multinomial regression model and count regression models were estimated to describe the profiles of customer segments and the frequency of channel usage based on generations and sociodemographic variables.

Findings – This study identified generational differences in channel usage. Single female customers from the Pre-Boomer or Baby Boomer generation and customers living in states with lower incomes are more likely to use call centres. Website users tend to live in regions with higher per capita income. Multichannel users are, on average, more frequent users of both the website and call centres. In terms of sociodemographics, they display a more heterogeneous profile.

Research limitations/implications – The proposed segmentation needs to be enriched with additional variables such as customers' health status or channel usage motivations.

Practical implications – Customers, who are male, married and from Generations Y and X, are more likely to use the website. Their propensity to switch to a digital channel could be investigated further to develop targeted migration strategies. Multichannel users are, on average, more frequent users of all channels. To avoid increased channel costs, segments should be analysed in terms of their size and profit potential to help allocate marketing investment more efficiently.

Originality/value – As opposed to existing research, the proposed segmentation approach is based on transactional data of channel usage from a real company, combined with analyses using generations and sociodemographic variables.

Keywords Insurance, Generations, Insurance companies, Multichannel customer segmentation

Paper type Research paper

1. Introduction

The development of digital channels has had an impact on the way companies and customers interact and communicate. In order to boost profitability by developing, nurturing and strengthening customer relationships, companies are offering customers a wide range of channels through which clients can search for information about products or services, make purchases, complain, ask for help and return products (Sands *et al.*, 2016; Verhoef *et al.*, 2015). Customers can, thus, deal with firms through various channels, such as brick-and-mortar retail stores, salespeople, mail order catalogues, e-mails, telephone numbers and online websites (Kumar and Venkatesan, 2005).

In this context, multichannel usage refers to a mix of channels by which customers can reach companies. Multichannel marketers' objectives are to allocate resources through different channels to satisfy customer needs and, ultimately, increase company profits (Sharma and Mehrotra, 2007).

Multichannel strategies are widespread and a prominent characteristic of the current competitive business environment. However, companies often struggle to serve customers effectively and profitably across channels (Rangaswamy and Van Bruggen, 2005). The proliferation of channels has resulted in several challenges for companies because they face complex integration issues when seeking to leverage the trade-offs among different channels (Watson *et al.*, 2015).

Companies need to manage channels more cost-effectively as the introduction of new channels may result in an increase in information technology expenses. Companies need to invest in effective ways to build and maintain a 360-degree view of customers, with the final goal of providing a seamless experience across all channels (Shankar *et al.*, 2011).

Currently, companies must strive to understand multichannel consumer behaviour – shedding light on how and why consumers use the different channels available to them – and to adopt appropriate multichannel segmentation strategies (De Keyser *et al.*, 2015). A thorough understanding of multichannel consumer behaviour, customer segments and their unique characteristics provides a clearer idea of the distribution of multichannel usage, which is key to delivering a unified customer experience. Segmentation has thus become critical to developing a successful multichannel strategy (De Keyser *et al.*, 2015), as confirmed by Konuş *et al.*'s (2008) research on the managerial value of developing tailor-made strategies that serve distinct customer segments using different channels.

Although multichannel segmentation is a critical issue, research on the topic is still rather scarce and only a few studies have been conducted in this area. Among these is Valentini *et al.*'s (2011) study, which examined channel choices in the purchase phase for a European book retailer. Kumar and Venkatesan (2005), in turn, found that customers who buy across multiple channels have a significantly higher value for the company compared to single-channel customers. Konuş *et al.* (2008) segmented consumers based on their attitudes towards multiple channels as search and purchase alternatives, identifying three different segments across seven product categories. The cited study was replicated and extended to include the after-sales stage by de Keyser *et al.* (2015), who identified six customer segments for a telecom retailer.

According to Sands *et al.* (2016), no "one size fits all" approach exists in multichannel segmentation, so more research is needed in this area in a variety of industries. In addition, Konuş *et al.* (2008) found that multichannel-based consumer segments differ across product categories. More product categories should thus be included in studies on multichannel segmentation.

Although multichannel strategies are currently widespread in all industries, the multichannel literature has, thus far, paid less attention to the service domain. More studies are, therefore, needed in the service industry to explore customer multichannel usage and behaviour (Neslin *et al.*, 2006; Klaus and Nguyen, 2013; Dalla Pozza and Texier, 2014; Dalla Pozza *et al.*, 2017).

The existing studies in multichannel segmentation rely on attitudinal and self-reported data rather than transactional data reflecting real customer usage. For instance, de Keyser *et al.* (2015) used self-report channel-use data. As attitudes have been shown to not predict behaviour perfectly, using actual transactional data is recommended for better results.

In response to the above findings, the present study sought to examine multichannel customer usage in the service sector and, more specifically, in the health insurance sector, as this is an unambiguous example of the service sector. The insurance industry is characterised by a higher product complexity that might affect the choice of channels in different stages of the buying process (Konuş *et al.*, 2008; Dalla Pozza and Texier, 2014).

In particular, the after-sales stage plays a major role in the insurance industry. Insurance products are intangible, and they are considered complex by customers. The post-purchase phase plays a major role as customers sometimes have to file claims and, thus, test the quality of the product they have bought. Costs for insurance companies occur later after purchase (e.g. in the case of accidents). However, in general, the literature on multichannel segmentation has paid less attention to multichannel customer behaviour in the post-purchase phase, which means that more studies are needed on this stage (Konuş *et al.*, 2008).

The present study identified segments of customers based on their frequency of channel usage in the post-purchase phase (i.e. call centre, web portal or multichannel customers). This classification permitted an assessment of the usage of channels in post-sales interactions. In a second step, these segments of customers were described based on consumer sociodemographics (i.e. age, marital status, generation, region of residence and income).

Although sociodemographic variables have been previously used in multichannel segmentation studies, their influence on segment membership is still controversial. Recent marketing literature has suggested that generations are a more efficient way to segment markets than just age groups (Schewe and Meredith, 2004), since the use of generations offers additional insights into the motivations of each segment. However, the concept of generations has never been used in multichannel segmentation to understand how generations use channels differently. In response to the above gap in the literature, the present research investigated the impact of generations on channel usage.

This study had two main objectives. First, it sought to enrich the existing literature on multichannel segmentation by defining and describing customer segments based on the frequency of channel usage in the post-purchase phase in the health insurance industry. Actual transactional data of channel usage were used – in contrast to the many multichannel studies in the literature that have relied on survey data (Konuş *et al.*, 2008; McGoldrick and Collins, 2007; Sands *et al.*, 2016) because actual behavioural data are extremely difficult to obtain (Konuş *et al.*, 2008). Second, the present research included identifying whether generational differences in multichannel behaviour exist in the post-purchase phase in the health insurance sector.

The following paper is divided into five sections. The first section presents a review of the marketing literature on multichannel segmentation and on generations in marketing, after which the resulting research questions are presented. In the second section, the research methodology is described. The third section discusses the results. The fourth section provides a discussion of results and their managerial implications. In the final section, avenues for future research and conclusions are presented.

2. Literature review and research questions

This section reviews the main studies of multichannel customer segmentation and those discussing generations in marketing. The limitations of the existing literature are highlighted, and the resulting research questions are introduced.

2.1 Multichannel segmentation research

Segmentation is one of the most important elements in the implementation of marketing strategies. Segmenting a market entails defining homogeneous groups of consumers who respond similarly to specific marketing stimuli (Kotler, 2012).

In complex multichannel environments, marketers have developed segmentation schemes to understand how consumers behave in the different phases of the buying process: information search, purchase and post-purchase (Elliott *et al.*, 2012). According to Neslin *et al.* (2006), multichannel consumer segmentation is key to designing effective multichannel strategies. When specific customer segments align with particular channels, companies can better develop

tailor-made marketing strategies and become more efficient. Multichannel customer segmentation can thus become a tool to drive, design and implement multichannel strategies. For instance, when preferred channels for information searches are identified for each segment, companies can better craft their communication via these channels. If a purchase channel is privileged over other channels, up-selling propositions need to be designed appropriately. When the information on customer segments is crossed with information on customer value or customer lifetime value (CLV) (Kumar, 2008), the appropriate level of marketing investment can be allocated to each channel, and/or the best customer migration strategies can be put into play.

Despite its strategic importance, the literature on multichannel segmentation is still quite scarce, and research in this area needs to be developed across product categories and phases of the purchase decision process (Konuş *et al.*, 2008). A few papers on this topic already exist. For instance, Thomas and Sullivan (2005) analysed the different behaviours of multichannel buyers vs single-channel buyers. The cited authors found that multichannel buyers generate more revenue for firms, buy more items and purchase these in more categories.

After analysing several product categories (i.e. mortgages, insurance, computers, home electronics, clothing, holidays and books), Konuş *et al.* (2008) identified three customer segments based on self-reported attitudes towards channels in the search and purchase phases: multichannel enthusiasts, uninvolved shoppers and store-focused consumers. In particular, multichannel shoppers are more open to the exploration of new channel alternatives. The cited study relied on survey data from 364 Dutch consumers. De Keyser *et al.* (2015) extended Konuş *et al.*'s (2008) research to include the after-sales stage and call centre channels in the telecom industry. De Keyser *et al.* (2015) identified six clusters of customers in terms of their use of different channels in various stages of these clients' experiences with services.

In grocery markets, apparel retailing and home entertainment settings in the UK, McGoldrick and Collins (2007) segmented customers according to survey data on their channel usage in the purchase phase. The authors found that store-focused customers are the predominant segment.

Sands *et al.* (2016) segmented multichannel consumers of clothing, holiday travel and consumer electronics across search, purchase and after-sales phases. The cited authors identify five multichannel consumer segments on the basis of perceived channel importance across the buying process. Keen *et al.* (2004), in turn, investigated the structure of consumer preferences when purchasing music compact disks and personal computers through three available channels – stores, the internet and catalogues.

A major shortcoming of these previous studies on multichannel segmentation is that they are based on self-reported or survey data. As mentioned previously, transactional data describing real customer behaviour need to be given preference in this kind of research as they describe reality better.

Based on Sands *et al.*'s (2016) observation that multichannel retailing has no "one size fits all" approach, the present study's objective was to enrich the existing literature on multichannel customer segmentation by proposing a segmentation approach based on real transactional data on the post-purchase stage in the service sector. The health insurance industry was selected as a clear-cut example of the service sector, that is generally higher in experience and credence quality (Elliott *et al.*, 2012). In addition, the insurance industry is characterised by complex products that can affect decision-making processes and choices of channels in different stages (Konuş *et al.*, 2008).

More specifically, the present research sought to define segments of customers according to their channel usage in the post-purchase phase, as well as to describe their profiles on the basis of sociodemographic characteristics. The choice of the post-purchase stage was dictated by many reasons. First, the post-sales phase is of particular importance in the

insurance industry as consumers buy a product that can be experienced only after purchase. The health insurance purchase phase is consequently characterised by high perceived risk.

Second, the post-purchase phase has been neglected in the multichannel literature, in general, yet this stage is of particular importance for determining customer satisfaction and loyalty (Dalla Pozza, 2014) since customers frequently ask for product support and contact customer service. Third, no prior study exists on multichannel segmentation of consumers in the post-purchase phase in the health insurance industry. The only previous study conducted on multichannel segmentation in the insurance industry analysed search and purchase phases in an automotive insurance setting (Elliott *et al.*, 2012).

Sociodemographic variables were used in the present research to describe segments of customers. Researchers have variously used sociodemographics, psychographics and relational, behavioural and channel attributes in their segmentation analysis (Konuş *et al.*, 2008). While sociodemographic variables have been previously used in multichannel segmentation, their influence is controversial, and thus need to be investigated further.

For instance, Konuş *et al.* (2008) found that sociodemographic variables do not appear to be relevant in determining customer segment membership. Similarly, de Keyser *et al.* (2015) did not find a significant effect of gender in their multichannel segmentation study. However, while applying their multichannel segmentation scheme, de Keyser *et al.* (2015) found that the cluster of customers who display a strong preference for using the internet in the information search but who purchase in stores and use the internet and the store for after-sales services tend to be young and have a high income. This segment uses a higher number of channels. In contrast, older customers tend to be store-focused, and customers who prefer to use call centres have lower incomes.

Strebel *et al.*'s (2004) study on multichannel information search revealed a significant impact of gender and age. In addition, according to Ansari *et al.* (2008), people with higher income are associated with multichannel use.

Given the previous research reviewed, the present study addressed the following research questions in a multichannel context in the post-purchase phase of health insurance:

RQ1. What is the profile in terms of sociodemographic characteristics of customer segments defined by channel usage?

RQ2. Are these sociodemographic characteristics associated with the frequency of channel usage in different customer segments?

2.2 Concept of "*generations*" *in marketing*

Marketers have started to pay more attention to the concept of generations. Generations are groups of individuals born during a particular time interval who share some core values (Fernández-Durán, 2016). These groups of individuals have experienced the same environmental events during their late adolescent and/or early adulthood. These events have shaped their values, beliefs and perceptions, which remain fundamentally unchanged throughout their life. These "deciding moments" mark their preferences, values and buying practices. Generational groups of consumers have been found to act similarly in regard to different aspects of life and, in particular, when making decisions as consumers.

If similarities among consumers are confirmed, firms can then offer the same products, advertisements and distribution channels to groups of consumers who might respond similarly to marketing efforts (Schewe and Meredith, 2004). The marketing literature has thus started to investigate generational differences in advertising research and consumer behaviour and management. For instance, Fowler *et al.* (2014) investigated generational differences in consumers' responses to visual fashion ideals in advertisements. Parment (2013) identified differences between generations in their buying involvement in purchase decisions. Motta and Schewe (2008), in turn, analysed how customer management decisions

are made across generational cohorts, while Eastman and Liu (2012) discussed the impact of generational cohorts on status consumption.

Marketers have, therefore, started to use generations in their segmentation processes (Fernández-Durán, 2016) because generations may form and define market segments. As Schewe and Meredith (2004) pointed out, while date of birth can be used as a segmentation variable, it helps only to describe segments, but it does not provide any insights into different segments' motivations. Thus, introducing generational differences in multichannel segmentation could offer additional valuable findings. Generational segmentation and targeting may help reposition product, service or communication campaigns to be more in line with a given generation's aspirations and motivations.

The literature on multichannel research has, until now, neglected to investigate generational differences in channel usage. No complete study exists of the differences among generations in using and choosing channels even though this is seen as an interesting avenue for future research. Some studies have introduced age as a covariate in their statistical models, thereby providing some insights. For instance, Campbell and Frei (2010) found that customers who are active online tend to be younger. McGoldrick and Collins (2007) confirmed that, for groceries and clothes, the multichannel segment is younger than both the store-focused segment and internet-prone cluster. Sousa and Voss (2012) found that older and female customers exhibit higher levels of e-loyalty expressed through intentions to use websites again.

The present study, thus, sought to address this gap by investigating generational differences in channel usage in the post-purchase phase for the health insurance industry. In other words, this research sought to answer the following additional research questions:

RQ3. What generational effects exist in the after-sales phase for health insurance?

RQ4. Are there generational effects on the frequency of channel usage for different segments?

Generations were defined based on year of birth groups commonly used in the USA. A generation is roughly 20-25 years in length, approximately the time for a person to grow up and have children (Schewe and Meredith, 2004). Four generations were defined for this study: (1) Generation Y born between 1977 and 1994, (2) Generation X born between 1965 and 1976, (3) Baby Boomers born between 1945 and 1964 and (4) Pre-Boomers born before 1945.

Jackson *et al.* (2011) described Generation X as one of the most highly educated and technologically savvy generations, while Norum (2003) defined Generation Y – also known as Millennials – as the first high-tech generation. Therefore, Generations Y and X were expected, in the present study, to use the web more than Baby Boomers.

3. Research methodology

As discussed previously, this research was conducted in an insurance context as it is a clear example of the service sector. As Dalla Pozza and Texier (2014) pointed out, the insurance industry plays a major role in the development of economies and countries. In addition, this industry was one of the earliest to adopt complex multichannel systems (Moriarty and Moran, 1990). Insurance companies typically use several channels of distribution and communication whose integration is a challenge for these firms. The industry has an extensive network of agencies that can be owned privately and use digital channels, such as websites, Twitter, Facebook, and, more recently, tchat and instant messaging.

The present study was conducted using data on a major health insurance company based in the USA. The company offers two main channels for customer interactions in the post-purchase phase: a call centre and a website. All customer transactions through both

channels for each given period (i.e. one year) are recorded, thus accurately describing customer channel usage behaviour in the post-purchase phase for health insurance policies.

These transactional data contain information about 182,204 customers, as well demographic data such as age, gender, marital status, US state of residence, average state per capita income, frequency of phone calls and online interactions in a given year. Differently from previous research in multichannel settings, the present research was based on a unique data set recording customer channel usage for a specific period, rather than relying on survey data.

3.1 Research population

The present study targeted one of the major providers of healthcare benefits based in the USA. As mentioned above, this insurance company uses two main channels to provide services to its policy holders: a consumer web portal and medical staff members and insurance agents in a call centre. Customers can use either channel to retrieve information on benefits, coverage and claim information and perform various self-service functions such as updating their primary care physician, ordering an identification (ID) card and accessing fulfilment materials. Self-service through the website has been found to be the least costly way to service customers.

The company maintains a cross-channel interaction history database that stores information about which customers require services and from which channel they are receiving services. Moreover, the data contain the following information that can be used to profile customers: ID, gender, US state, age, marital status and number of website and call centre interactions.

3.2 Data

Based on each customer's number of website and call centre interactions, the customer was first classified into three different groups: those who only use the call centre; those who only use the web portal; and those who are multichannel users.

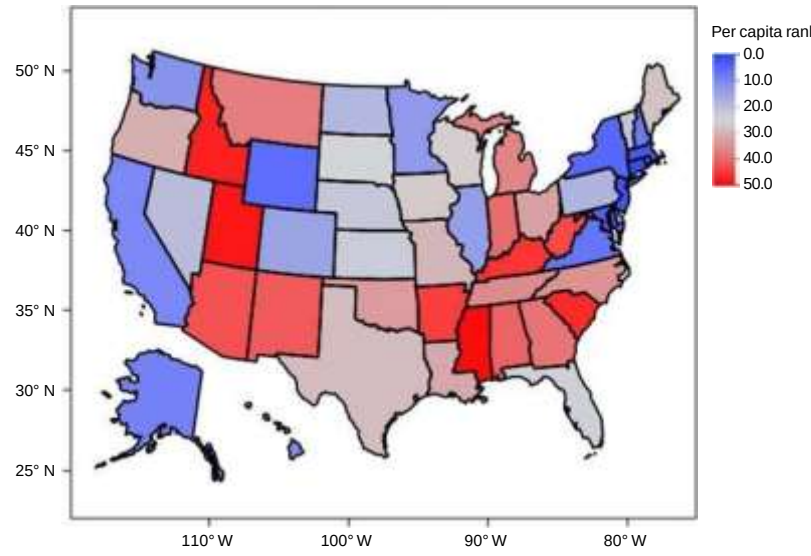
Predictor variables were used in further data processing. First, two nominal variables were coded as follows: gender as female (1) vs male (2) and marital status as single (1) and married (2). A formula converting age to generations was added, yielding four groups: Generation Y (1) born between 1977 and 1994, Generation X (2) born between 1965 and 1976, Baby Boomers (3) born between 1945 and 1964 and Pre-Boomers (4) born before 1945.

From government census information, data were collected on customers' region based on their US state of residence and per capita income (see Figure 1). As a result of this analysis, the 50 states were classified into eight subregions: East North Central, East South Central, Mid-Atlantic, Mountain, New England, Pacific, West North Central and West South Central. Moreover, states were grouped into two groups according to their median income per capita: below the median and above the median.

3.3 Statistical methods

The insurance customers in question were classified by channel usage into three groups. The groups represent the single-channel users – either call centre users or website users – and multichannel users. This type of classification is in line with behavioural customer segmentation related to channel usage, as described in the literature on marketing (Kotler and Armstrong, 2010).

The next step in the present research was to test whether demographics data and the generation of the customer could be used to predict group membership. The analysis sought to answer *RQ1* and *RQ3*. This study employed multinomial logistic (MNL) regression to classify and profile the insurance company's customers. The MNL regression considered the



dependent variables to be the three different categories of customers, defined according to their channel usage behaviours: website, call centre and multichannel users. MNL mathematically estimates log odds ratios in order to compare different levels of the dependent variables.

The data set did not specify the reasons for making contact, products purchased and information about past contacts that might impact the observed behaviour. Moreover, information about health status and technological affinity, which could be valuable in this context, was missing. The predictors in this study were thus restricted to gender, marital status, generation, region of residence and per capita income of customers' state of residence.

After estimating the model, three indicators were checked to determine whether the model reasonably approximates the data's behaviour: the model fitting information, the pseudo R^2 statistic and the likelihood ratio test statistic. These tested the contribution of each variable to the model.

Next, in order to interpret the outputs of the MNL regression, the statistical significance of each parameter and its odds ratio were analysed. The present study used the call centre category as the basis for all analyses. Therefore, each group was first compared to this group of users.

Finally, to answer *RQ2* and *RQ4* and to model frequency of usage, four count regression models were estimated to identify the main correlates of the total number of contacts for: the overall sample (i.e. call centre and web portal contacts), single-channel web portal users, single-channel call centre users and multichannel users. Negative binomial count data models were employed to account for overdispersion.

4. Results

4.1 Sample profile

The sample comprised 54.1 per cent female and 45.9 per cent male customers. The majority of the customers (53.2 per cent) belong to the Baby Boomer generation, followed by customers from Generation X (22.8 per cent). The oldest generation (i.e. Pre-Boomer) represents 9.2 per cent of the sample, and customers from Generation Y make up

14.8 per cent of the sample. The majority of customers were married (69.4 per cent). Out of the sample, 48.0 per cent of the customers resided in the South, 19.20 per cent in the Northeast, 18.9 per cent in the West and 13.8 per cent in the Midwest. The median of the per capita income of the 51 states was US$36,935, and 54.6 per cent customers were residents in states with a per capita income higher than this value (see Table I).

4.2 Channel usage

Frequency of channel usage in the post-purchase phase was used to classify customers as either single- or multichannel users. Single-channel users represent 86.8 per cent of the sample. Moreover, for the majority of the sample (69.5 per cent), the call centre remains the main channel to contact customer service, so the call centre is the privileged channel. On average, consumers make three calls per year. Only 17.3 per cent of the sample use the web portal exclusively, and the latter clients also contact the company, on average, three times per year. Around 13.2 per cent of the sample use both channels in the post-purchase phase. Multichannel users are, on average, more frequent users of both channels. They register in annual average of eight contacts, four through the call centre and four using the web portal (see Table II).

Variable		Categories	*N*	%
Gender		Female	98,638	54.1
		Male	83,566	45.9
Generation		Generation Y	26,970	14.8
		Generation X	41,533	22.8
		Baby Boomers	96,948	53.2
		Pre-Boomers	16,753	9.2
Marital status		Single	55,738	30.6
		Married	126,466	69.4
State per capita income		⩽ $36,935	82,782	45.4
		W$36,935	99,422	54.6
Region	Midwest	East North Central	18,230	10.0
		West North Central	6,846	3.8
	Northeast	Mid-Atlantic	20,545	11.3
		New England	14,453	7.9
	South	East South Central	20,228	11.1
		South Atlantic	48,308	26.5
		West South Central	19,101	10.5
	West	Mountain	17,291	9.5
		Pacific	17,202	9.4

Table I. Sample profile

	Single-channel		Multichannel			Overall		
No. of contacts	Call centre	Web	Call centre	Web	Total	Call centre	Web	Total
Average	3.04	2.80	4.10	4.07	8.17	2.65	1.02	3.67
SD	3.69	4.30	4.90	6.26	8.37	3.78	3.30	5.00
25th percentile	1.00	1.00	1.00	1.00	3.00	1.00	0.00	1.00
Median	2.00	2.00	2.00	2.00	6.00	1.00	0.00	2.00
75th percentile	4.00	3.00	5.00	4.00	10.00	3.00	1.00	4.00
N	126,625	31,505		24,074			182,204	
%	69.50	17.29		13.21			100.00	

Table II. Number of contacts by channel

4.3 Multinomial regression results: profile of three segments

A multinomial regression model was constructed to profile each of the three segments defined *a priori* – based on demographics and generations. This analysis sought to answer research questions one and three. The base category was the group that only uses the call centre to contact the insurance company. As all the independent variables were qualitative (i.e. nominal or ordinal), the analysis proceeded by transforming the variables into dummy variables.

4.3.1 Model fit. The χ^2 statistic is the difference between the negative 2 log-likelihood of the null and final models. Therefore, the results reveal that the final model outperforms the null model (χ^2 ¼ 10,123.91; p ¼ 0.00). The pseudo R^2 measures indicate a reasonable level of fit. The classification table indicates that 76.21 per cent of the cases are correctly classified. The likelihood ratio test statistic checks the contribution of each effect to the model. The results reveal that all the variables contribute to the model. Thus, all the variables retained in the analysis play a significant role in the model (see Table III).

4.3.2 Parameter estimates. Each variable was examined in terms of significance and β values and signs, as well as their respective Wald tests and p-values (see Table IV). Positive and negative signs of β increase and decrease, respectively, the odds that an individual belongs to the reference group. Table IV presents the parameter estimates, namely, the effect of each predictor, the standard error and the significance level of the Wald statistic (i.e. the squared ratio of the coefficient to its standard error). A threshold of 5 per cent was set for the statistical tests.

Parameters with significant positive or negative coefficients increase or decrease the likelihood of that response category with respect to the reference category. The parameters associated with the base category of each factor are redundant given the intercept term.

Regarding single-channel users, the most popular channel is the call centre, exclusively used by the majority of the customers (69.5 per cent). Notably, a clear demographic profile is associated with call centre users. They tend to be single females from the Pre-Boomer or Boomer generation. Customers from lower income states are also more likely to use the call centre. In addition, customers from the East South Central region are more likely to use the call centre than the website.

The multinomial regression results also identify the profile of those customers who only use the web portal (17.3 per cent). Male customers are more likely to be website users as compared with female customers. The relative probability of using the web portal rather than the call centre is 46 per cent lower for females than for males – when all the other variables in the model are held constant.

	Negative 2 log-likelihood of reduced model	Likelihood ratio tests χ^2
Effect		
Model fit results		

Table III.

Gender	6,777.61	2,205.04***
Marital status	4,702.74	130.16***
Generation	14,998.18	7,139.58***
Region	5,570.63	998.06***
Income	4,821.72	249.14***
Model		
Intercept only	14,696.48	
Final	4,572.58	10,123.91***

Notes: Pseudo R^2: Cox and Snell ¼ 0.154; Nagelkerke ¼ 0.167; MacFadden ¼ 0.134; % correctly classified ¼ 76.21%. *,**,***Significant at the 0.1, 1 and 5 per cent levels, respectively

Channel	Variable	*B*	Exp. (B)	SD	Sig.
Web[a]	Intercept	−1.40		0.03	***
	Gender ¼ Female[b]	−0.61	0.54	0.01	***
	Marital status ¼ Single[c]	−0.13	0.88	0.01	***
	Generation ¼ Gen X[d]	−0.07	0.93	0.02	***
	Generation ¼ Boomer[d]	−0.68	0.51	0.02	***
	Generation ¼ Pre-Boomer[d]	−2.20	0.11	0.04	***
	Region ¼ East North Central[e]	0.40	1.49	0.03	***
	Region ¼ East South Central[e]	−0.19	0.82	0.03	***
	Region ¼ Mid-Atlantic[e]	0.37	1.44	0.03	***
	Region ¼ Mountain[e]	0.28	1.33	0.03	***
	Region ¼ New England[e]	0.56	1.74	0.03	***
	Region ¼ Pacific[e]	0.26	1.30	0.03	***
	Region ¼ South Atlantic[e]	0.25	1.29	0.03	***
	Region ¼ West North Central[e]	0.55	1.74	0.04	***
	State per capita income⇒US$36,935[f]	0.26	1.30	0.02	***
Multichannel[a]	Intercept	−1.57		0.03	***
	Gender ¼ Female[b]	−0.11	0.89	0.01	***
	Marital Status ¼ Single[c]	−0.14	0.87	0.02	***
	Generation ¼ Gen X[d]	−0.06	0.94	0.02	***
	Generation ¼ Boomer[d]	−0.27	0.77	0.02	***
	Generation ¼ Pre-Boomer[d]	−1.33	0.26	0.04	***
	Region ¼ East North Central[e]	0.24	1.27	0.03	***
	Region ¼ East South Central[e]	−0.25	0.78	0.03	***
	Region ¼ Mid-Atlantic[e]	0.31	1.36	0.04	***
	Region ¼ Mountain[e]	0.09	1.10	0.03	***
	Region ¼ New England[e]	0.21	1.23	0.04	***
	Region ¼ Pacific[e]	0.00	1.00	0.04	
	Region ¼ South Atlantic[e]	0.10	1.11	0.03	***
	Region ¼ West North Central[e]	0.27	1.31	0.04	***
	State per capita income ⇒US$36,935[f]	0.13	1.14	0.02	***

Notes: [a]The reference category is: call centre; [b]Base category ¼ male; [c]Base category ¼ married; [d]Base category ¼ Generation Y; [e]Base category ¼ West South Central; [f]Base categoryoUS$36,935 (this parameter of the base categories is set to zero because they are redundant). *,**,***Significant at the 0.1, 1 and 5 per cent levels, respectively

Table IV.
Parameter estimate results

Moreover, married customers and Generations Y or X customers are more likely to use the web portal channel. Customers from the Pre-Boomer generation are the least likely to use the web. The results also reveal that single customers are 12 per cent less likely to use the web portal channel as opposed to the call centre than married customers are. The relative probability of using the web portal channel rather than the call centre is smaller for consumers from Generation X and Boomer and Pre-Boomer generations (i.e. 7, 49 and 89 per cent, respectively) than for Generation Y consumers.

Website users tend to be younger, which confirms the results from previous research reported in the literature. In terms of regions, customers who live in states with higher per capita income are 30 per cent more likely to use the web portal channel than the call centre. Moreover, the relative probability of using the web portal channel rather than the call centre is 74 per cent higher for customers living in New England and the West North Central regions compared with customers living in the West South Central region.

Males and those who are married are more likely to be multichannel users than single users of the call centre. The results also reveal that the relative probability of using both channels over using only the call centre is 11 per cent lower for females than for males and 13 per cent lower for single customers than for married individuals, all other things being equal.

Customers from the Pre-Boomer generation are less likely to be multichannel users as they exhibit a strong preference for the call centre. The relative probability of using both channels rather than the call centre only is lower by 6, 23 and 74 per cent for consumers from Generation X and Boomer and Pre-Boomer generations, respectively, than for consumers from Generation Y.

Thus, younger customers are more prone to use multiple channels than older customers in the post-purchase phase. Overall, the results show that the identified segments differ in terms of sociodemographic characteristics and generations.

4.4 Count regression results

The results of the count regression models showed that demographics and generations are associated with the frequency of channel usage (RQ2 and *RQ4*).

The results of the negative binomial count regression for the total number of contacts reveal that the number of contacts is higher for female customers, the Baby Boomer generation, and customers who live in the Mid-Atlantic region. The generation with the lowest number of contacts is the Pre-Boomers. The average numbers of contacts of Generations X and Y are the same. State income is not statistically significant in this model.

The model for single-channel users of the call centre reveals that the number of contacts is higher for females and Baby Boomers, followed by the Pre-Boomers. Customers from the Mid-Atlantic region are associated with, on average, a higher number of contacts.

The model for single-channel users of the web portal indicates that males account for more contacts compared with females. The frequency of contacts is higher for married consumers, consumers from Generations Y and X and those who live in New England and regions with a higher average income. Finally, multichannel users who registered more contacts are females, single customers and from the Pre-Boomer and Baby Boomer generations (Table V).

	No. of contacts (total)	No. of contacts: multichannel users	No. of contacts: single-channel call centre users	No. of contacts: single-channel web users
results				

Table V.
Count regression

Variable												
		0.01	0.01		0.02	0.02		0.03	0.01	***	0.00	0.01	
	Generation ¼ Boomer[c]	0.10	0.00	***	0.09	0.01	***	0.18	0.01	***	−0.05	0.01	***
B	Generation ¼ Pre Boomer[c]	−0.03	0.01	***	0.16	0.03	***	0.14	0.01	***	−0.25	0.04	***
	Region ¼ East North Central[d]	−0.04	0.01	***	0.02	0.02		−0.19	0.01	***	0.26	0.02	***
SE	Region ¼ East South Central[d]	−0.08	0.01	***	−0.09	0.02	***	−0.05	0.01	***	0.02	0.02	
Sig.	Region ¼ Mid-Atlantic[d]	0.08	0.01	***	0.13	0.02	***	−0.04	0.01	**	0.20	0.03	***
	Region ¼ Mountain[d]	0.00	0.01	***	0.03	0.02		−0.05	0.01	***	0.11	0.02	***
B	Region ¼ New England[d]	−0.08	0.01		−0.11	0.03	***	−0.18	0.01	***	0.27	0.03	***
	Region ¼ Pacific[d]	−0.02	0.01	***	0.03	0.03		−0.06	0.01	***	0.09	0.03	***
SE	Region ¼ South Atlantic[d]	−0.05	0.01	*	−0.03	0.02		−0.12	0.01	***	0.15	0.02	***
Sig.	Region ¼ West North Central[d]	−0.07	0.01	***	−0.03	0.03		−0.17	0.02	***	0.10	0.03	***
	State per capita income ⇒US$36,935[e]	0.00	0.00	***	0.00	0.01		−0.04	0.01	***	0.05	0.01	***
B	Likelihood ratio statistic	121,758***			29,734***			33,130***			72,889***		
	R^2(%)	26.32			16.55			23.93			22.14		

SE

Notes: [a]Base category ¼ male; [b]Base category ¼ married; [c]Base category ¼ Generation Y; [d]Base category ¼ West South Central; [e]Base category oUS$36,935 (this parameter of the base categories is set to zero because they are redundant). *,**,***Significant at the 0.1, 1 and 5 per cent levels, respectively

Sig.

B

SE Sig.

Intercept

1.25
0.01

2.02 0.02
***

1.05 0.01
***

0.94 0.02 ***
Gender ¼
Female[a]

0.03 0.00
***

0.02 0.01
*

0.07 0.01 ***
−0.10 0.01 ***
Marital Status ¼
Single[b]

−0.01 0.00
***

0.04 0.01
***

0.01 0.01
*

−0.04 0.01 **
Generation ¼
Gen
X[c]

5. Discussion

Companies need to understand multichannel consumer behaviour through studies that shed light on how and why consumers use the different channels available to them, thereby enabling firms to utilise multichannel segmentation. Although the latter is a valuable strategy, research on multichannel segmentation is still quite scarce, and researchers have been called upon to extend research to a larger set of product categories and industries.

The objective of the present study was to perform a multichannel segmentation of customers according to their channel usage during the post-purchase phase in the health insurance industry. Sociodemographic and generational characteristics were used to perform the segmentation analyses. The insurance industry was selected because of its complex credence products and because the quality of insurance policies can be experienced only in the after-sales stage. Real channel usage data were obtained from a major US-based health insurance company for 182,204 customers.

This research was able to segment customers based on real channel usage in the post-purchase phase. Three customer segments were identified: single-channel call centre users, single-channel web portal users and multichannel users. Multinomial regression was employed to describe the customer segments' profile on the basis of sociodemographic and generational characteristics. In addition, count regressions were performed to describe frequency of channel usage based on sociodemographic and generational characteristics.

The majority of customers (53.2 per cent) belong to the Baby Boomer generation, followed by customers from Generation X (22.8 per cent). Single-channel users represent 86.8 per cent of the sample. The call centre is the privileged channel to contact customer service for the majority of the sample (69.5 per cent). Web portal users only represent 17.3 per cent of the sample, while multichannel usage is associated with 13.2 per cent of the customers. Multichannel users are, on average, more frequent users of both channels.

Based on the multinomial regression results, the profiles of the different segments were identified based on sociodemographic and generational characteristics. Gender, generations and income were found to be correlated to channel usage. A precise sociodemographic profile is associated with single-channel call centre users: single females from the Pre-Boomer or Baby Boomer generations have a higher propensity to use the call centre. Customers from lower income states are also more likely to use the call centre.

Web portal users are more likely to be male rather than female, and they are more likely to be married and belong to Generations X or Y. Pre-Boomers are the least likely to use the web portal. In terms of regions, customers who live in states with higher per capita income and in New England and the West North Central regions are more likely to use the Web portal channel.

A clear profile is also associated with the segment of multichannel users, who collectively represent only 13.2 per cent of the sample. Multichannel users tend to be male, married and younger than single-channel call centre users, and the former users live in higher per capita income regions.

Multichannel users and web users display a more similar profile as opposed to single-channel call centre users. However, web users tend to be more associated with a male profile and residents of states with higher per capita income, as opposed to the multichannel group. More precisely, web users are more often from Generations Y and X.

Frequencies of channel usage were modelled using negative binomial count regressions. Among single-channel users of the call centre, the number of contacts is higher for females and Baby Boomers, followed by Pre-Boomers and users living in states with a lower income, such as those in the Mid-Atlantic region. In the model for single-channel users of the web portal, the frequency of contacts is higher for married male consumers, Generations Y and X and those who live in regions with higher income.

Multichannel users are, on average, more frequent users of both channels. For this group, web adoption results in a multiplicative effect and a higher usage of both the web portal and the call centre. The multichannel group is quite heterogeneous. While, on average, the multichannel customers tend to be male and married, those multichannel users who registered more contacts across the two channels are female, single and Pre-Boomers or Baby Boomers.

The latter customer profile is also predominant in the single-channel call centre segment, which displays a similarly higher frequency of usage. This means that, if customers with this profile were to migrate and adopt the use of the web portal, this will not produce a replacement effect of the more expensive telephone channel in favour of the web portal but, instead, a multiplicative effect in the use of all channels. In the end, the availability of multiple channels results in a more intense usage of all channels. This finding indicates that multiple channels ultimately represent for the company a consistent cost increase.

5.1 Managerial recommendations

This paper presented a multichannel segmentation approach to identifying customer segments based on channel usage in the post-purchase phase in the health insurance industry. The segmentation was conducted based on real channel usage data and sociodemographic variables contained in a single company's database. Generations were also used to describe the segments.

Companies need to perform multichannel segmentation to gain deeper insights into how channels are used. However, this is currently not a common practice. Companies may lack the necessary transactional data related to channel usage to perform this analysis. As the number of channels increase and proliferate, companies face the challenge of integrating customer data coming from separate and different channels.

Despite the rapid development of digital channels to communicate with customers (such as e-mails, websites, Facebook and Twitter) (Dalla Pozza, 2014), the present results show that the telephone remains the main channel used to contact customer service in the post-purchase phase in the health insurance industry. This can be explained by considering the specificities of the health insurance industry. Products are complex, and customers have to deal with difficult situations such as filing claims declarations. Thus, insurance clients turn more frequently to the telephone to find support and reassurance through human contact. As the data obtained does not specify the reason why customers contact customer service (i.e. claim management and/or declarations vs search for information), companies may need to develop different strategies for dealing with the various tasks customers have to perform in the post-purchase phase.

For claim declarations, the telephone might remain the preferred channel, so insurance companies may communicate better with customers on the new digital channels when customers need to perform self-care activities or lower added-value activities. These could include information searches, guarantees and profile management. Companies should, therefore, engage in stronger, clearer communication with customers to reveal each channel's potential uses and to facilitate customers' understanding of the channel choices available to them.

The call centre remains the most expensive channel as compared to the web portal. Firms might find it profitable to target some specific customer segments and convert them to other lower-cost channels over time. The present study found that male married customers from Generations X and Y are more likely to use the web portal. As mentioned in the Results section, the relative probability of using the web portal as opposed to the call centre is 46 per cent lower for females than for males and 49 and 89 per cent lower for consumers from the Boomer and Pre-Boomer generations than for Generation Y consumers.

Companies should communicate the potential benefits of the self-care approach more clearly to these clients. Their propensity to switch to digital channels of communication could be investigated further to develop targeted migration strategies.

Multichannel users are on average more frequent users of both channels, which means that, when customers in this segment adopt the web portal, they do not stop using the more expensive call centre channel. Instead, these customers' behaviour has a multiplicative effect on the use of all channels, which can ultimately represent a consistent cost increase for companies. Thus, companies need to monitor channel costs accurately and develop appropriate marketing strategies. The customer service support system may represent an important part of companies' costs. As channels of contact multiply and proliferate, firms' costs might increase dramatically, so cost control is imperative. Multichannel customer segments need to be analysed in terms of their size, loyalty and profit potential, including calculating the CLV, to design appropriate marketing strategies and allocate marketing investment efficiently.

For instance, the information on CLV should be matched with the information on channel usage. Given customers with a low profit potential (i.e. low CLV) who use the call centre channel heavily, companies might think of migrating these customers towards a lower-cost channel such as the internet. In contrast, high profit potential customers need to be given priority by the call centre or contacted via their preferred channel for outbound marketing communications. This would allow companies to allocate their resources better and remain profitable. However, multichannel research combining CLV and multichannel segmentation is still quite scarce.

For the insurance industry, information on channel usage could be related to pricing. For instance, a major European bank and insurance company is seeking to develop insurance products whose pricing depends, in part, on the most preferred channels customers will use to have access to this product during its entire life cycle. In general, insurance companies are trying to find strategies to develop policies on a more individual basis. Although this strategy has some limitations due to pricing practices based on principles of mutualism, a more in-depth understanding of customer channel usage could help firms develop more personalised prices.

5.2 Limitations and future research directions

This study relied on transactional data of a health insurance company, on customers' channel usage in the post-purchase phase. This approach had some limitations because the database only contained the frequency of channel usage for one specific year. The proposed segmentation method also can be enriched with additional psychographic variables that could pinpoint channel usage motivations. Furthermore, despite the use of multinomial and count regression models, the results only show correlations. This study could, therefore, be extended to include a different research design such as experimentation in order to establish causality.

In addition, longitudinal transactional data would enable a study of how past frequency of contact in each channel affects future contacts. Further information is needed about the reason customers contact customer service, the type of services purchased and customers' technological affinity and health status. These data could lead to a better understanding of the frequency of contacts in the context of multiple channels in the post-purchase phase, thereby improving the predictive capacity of the model. Future studies could collect these data from company databases and customer surveys.

This research did not address possible endogenous company effects on channel usage frequency. The frequency of contacts – specifically those through the call centre – could be influenced by the company's inability to provide clear answers to customers' questions. Future research could include an analysis of the motives for contacting insurance

companies, testing whether the different segments of single- and multichannel users are associated with different reasons for contacting customer service. Moreover, regarding those customers who are multichannel users, qualitative data might allow researchers to understand more fully the synergies among websites and call centres.

As the present research only used health insurance data, future studies must test whether the same variables are relevant in other segments of the insurance sector. In addition, the current study included data only from a US-based company. Future research should also gather data in other countries and also focus on emerging economies, such as China and India. Finally, the present research ignored relatively new channels such as chat and virtual communities, although the implementation and adoption of these new channels remains rather low.

References

Ansari, A., Mela, C.F. and Neslin, S.A. (2008), "Customer channel migration", *Journal of Marketing Research*, Vol. 45 No. 1, pp. 60-76.

Campbell, D. and Frei, F. (2010), "Cost structure, customer profitability, and retention implications of self-service distribution channels: evidence from customer behavior in an online banking channel", *Management Science*, Vol. 56 No. 1, pp. 4-24.

Dalla Pozza, I. (2014), "Multichannel management gets 'social' ", *European Journal of Marketing*, Vol. 48 Nos 7/8, pp. 1274-1295, doi: 10.1108/EJM-10-2012-0598.

Dalla Pozza, I. and Texier, L. (2014), "Managing multichannel strategies in the service sector: the example of the French insurance industry", *Journal of Applied Business Research*, Vol. 30 No. 3, pp. 863-868.

Dalla Pozza, I., Heitz-Spahn, S. and Texier, L. (2017), "Generation Y multichannel behaviour for complex services: the need for human contact embodied through a distance relationship", *Journal of Strategic Marketing*, Vol. 25 No. 3, pp. 226-239.

De Keyser, A., Schepers, J. and Konuş, U. (2015), "Multichannel customer segmentation: does the after-sales channel matter? A replication and extension", *International Journal of Research in Marketing*, Vol. 32 No. 4, pp. 453-456.

Eastman, J.K. and Liu, J. (2012), "The impact of generational cohorts on status consumption: an exploratory look at generational cohort and demographics on status consumption", *The Journal of Consumer Marketing*, Vol. 29 No. 2, pp. 93-102.

Elliott, M.T., Fu, F.Q. and Speck, P.S. (2012), "Information search and purchase patterns in a multichannel service industry", *Services Marketing Quarterly*, Vol. 33 No. 4, pp. 292-310.

Fernández-Durán, J.J. (2016), "Defining generational cohorts for marketing in Mexico", *Journal of Business Research*, Vol. 69 No. 2, pp. 435-444.

Fowler, J.G., Reisenwitz, T.H. and Fowler, A.R. (2014), "Fashion globally", *Qualitative Market Research*, Vol. 17 No. 3, pp. 172-191.

Jackson, V., Stoel, L. and Brantley, A. (2011), "Mall attributes and shopping value: differences by gender and generational cohort", *Journal of Retailing and Consumer Services*, Vol. 18 No. 1, pp. 1-9.

Keen, C., Wetzels, M., De Ruyter, K. and Feinberg, R.A. (2004), "E-tailers versus retailers: which factors determine customer preferences", *Journal of Business Research*, Vol. 57 No. 7, pp. 685-689.

Klaus, P. and Nguyen, B. (2013), "Exploring the role of the online customer experience in firms' multi-channel strategy: an empirical analysis of the retail banking services sector", *Journal of Strategic Marketing*, Vol. 21 No. 5, pp. 429-442.

Konuş, U., Verhoef, P.C. and Neslin, S.A. (2008), "Multichannel shopper segments and their covariates", *Journal of Retailing*, Vol. 84 No. 4, pp. 398-413.

Kotler, P. (2012), *Marketing Management*, Pearson Education, NJ.

Kotler, P. and Armstrong, G. (2010), *Principles of Marketing*, Pearson Education, Upper Saddle River, NJ.

Kumar, V. (2008), *Managing Customers for Profit, Strategies to Increase Profits and Build Loyalty*, Pearson, Upper Saddle River, NJ.

Kumar, V. and Venkatesan, R. (2005), "Who are the multichannel shoppers and how do they perform? Correlates of multichannel shopping behaviour", *Journal of Interactive Marketing*, Vol. 19 No. 2, pp. 44-62.

McGoldrick, P.J. and Collins, N. (2007), "Multichannel retailing: profiling the multichannel shopper", *The International Review of Retail, Distribution and Consumer Research*, Vol. 17 No. 2, pp. 139-158, doi: 10.1080/09593960701189937.

Moriarty, R.T. and Moran, U. (1990), "Managing hybrid marketing systems", *Harvard Business Review*, Vol. 68 No. 6, pp. 146-155.

Motta, P.C. and Schewe, C.D. (2008), "Are marketing management decisions shaped during one's coming of age?", *Management Decision*, Vol. 46 No. 7, pp. 1096-1110.

Neslin, S.A., Grewal, D., Leghorn, R., Shankar, V., Teerling, M.L., Thomas, J.S. and Verhoef, P.C. (2006), "Challenges and opportunities in multichannel customer management", *Journal of Service Research*, Vol. 9 No. 2, pp. 95-112.

Norum, P.S. (2003), "Examination of generational differences in household apparel expenditures", *Family and Consumer Sciences Research Journal*, Vol. 32 No. 1, pp. 52-75.

Parment, A. (2013), "Generation Y vs. Baby Boomers: shopping behavior, buyer involvement and implications for retailing", *Journal of Retailing and Consumer Services*, Vol. 20 No. 2, pp. 189-199.

Rangaswamy, A. and Van Bruggen, G.H. (2005), "Opportunities and challenges in multichannel marketing: an introduction to the special issue", *Journal of Interactive Marketing*, Vol. 19 No. 2, pp. 5-11.

Sands, S., Ferraro, C., Campbell, C. and Pallant, J. (2016), "Segmenting multichannel consumers across search, purchase and after-sales", *Journal of Retailing and Consumer Services*, Vol. 33, November, pp. 62-71, available at: https://doi.org/10.1016/j.jretconser.2016.08.001

Schewe, C.D. and Meredith, G. (2004), "Segmenting global markets by generational cohorts: Determining motivations by age", *Journal of Consumer Behaviour*, Vol. 4 No. 1, pp. 51-63.

Shankar, V., Inman, J.J., Mantrala, M., Kelley, E. and Rizley, R. (2011), "Innovations in shopper marketing: current insights and future research issues", *Journal of Retailing*, Vol. 87 No. 1, pp. S29-S42.

Sharma, A. and Mehrotra, A. (2007), "Choosing an optimal channel mix in multichannel environments", *Industrial Marketing Management*, Vol. 36 No. 1, pp. 21-28, available at: http://dx.doi.org/10.1016/j.indmarman.2006.06.012

Sousa, R. and Voss, C. (2012), "The impacts of e-service quality on customer behaviour in multi-channel e-services", *Total Quality Management & Business Excellence*, Vol. 23 Nos 7-8, pp. 789-806, doi: 10.1080/14783363.2012.661139.

Strebel, J., Erdem, T. and Swait, J. (2004), "Consumer search in high technology markets: exploring the use of traditional information channels", *Journal of Consumer Psychology*, Vol. 14 Nos 1-2, pp. 96-104.

Thomas, J.S. and Sullivan, U.Y. (2005), "Managing marketing communications with multichannel customers", *Journal of Marketing*, Vol. 69 No. 4, pp. 239-251.

Valentini, S., Montaguti, E. and Neslin, S.A. (2011), "Decision process evolution in customer channel choice", *Journal of Marketing*, Vol. 75 No. 6, pp. 72-86.

Verhoef, P.C., Kannan, P.K. and Inman, J.J. (2015), "From multi-channel retailing to omni-channel retailing: introduction to the special issue on multi-channel retailing", *Journal of Retailing*, Vol. 91 No. 2, pp. 174-181, available at: http://dx.doi.org/10.1016/j.jretai.2015.02.005

Watson, G.F., Worm, S., Palmatier, R.W. and Ganesan, S. (2015), "The evolution of marketing channels: trends and research directions", *Journal of Retailing*, Vol. 91 No. 4, pp. 546-568.

Further reading

Berman, B. and Thelen, S. (2004), "A guide to developing and managing a well-integrated multi-channel retail strategy", *International Journal of Retail & Distribution Management*, Vol. 3 No. 3, pp. 147-156.

Easingwood, C. and Coelho, F. (2003), "Single versus multiple channel strategies: typologies and drivers", *Service Industries Journal*, Vol. 23 No. 2, pp. 31-46.

Gensler, S., Verhoef, P.C. and Böhm, M. (2012), "Understanding consumers' multichannel choices across the different stages of the buying process", *Marketing Letters*, Vol. 23 No. 4, pp. 987-1003, available at: http://dx.doi.org/10.1007/s11002-012-9199-9

Godfrey, A., Seiders, K. and Voss, G.B. (2011), "Enough is enough! The fine line in executing multichannel relational communication", *Journal of Marketing*, Vol. 75 No. 4, pp. 94-109.

Jagpal, H.S. (1981), "Measuring joint advertising effects in multiproduct firms", *Journal of Advertising Research*, Vol. 21 No. 1, pp. 65-69.

McCallagh, P. and Nelder, J.A. (1989), *Generalized Linear Models*, Chapman & Hall, London.

Montoya-Weiss, M.M., Voss, G.B. and Grewal, D. (2003), "Determinants of online channel use and overall satisfaction with a relational, multichannel service provider", *Journal of the Academy of Marketing Science*, Vol. 31 No. 4, pp. 448-458.

Naik, P.A. and Raman, K. (2003), "Understanding the impact of synergy in multimedia communications", *Journal of Marketing Research*, Vol. 40 No. 4, pp. 375-388.

Noble, S.M., Haytko, D.L. and Phillips, J. (2009), "What drives college-age Generation Y consumers?", *Journal of Business Research*, Vol. 62 No. 6, pp. 617-628.

Prins, R. and Verhoef, P.C. (2007), "Marketing communication drivers of adoption timing of a new e-service among existing customers", *Journal of Marketing*, Vol. 71 No. 2, pp. 169-183.

Verhoef, P.C., Neslin, S.A. and Vroomen, B. (2007), "Multichannel customer management: understanding the research-shopper phenomenon", *International Journal of Research in Marketing*, Vol. 24 No. 2, pp. 129-148.

Wallace, D.W., Giese, J.L. and Johnson, J.L. (2004), "Customer retailer loyalty in the context of multiple channel strategies", *Journal of Retailing*, Vol. 80 No. 4, pp. 249-263, available at: http://dx.doi.org/10.1016/j.jretai.2004.10.002

Yu, U.-J., Niehm, L.S. and Russell, D.W. (2011), "Exploring perceived channel price, quality, and value as antecedents of channel choice and usage in multichannel shopping", *Journal of Marketing Channels*, Vol. 18 No. 2, pp. 79-102.

Zhang, J., Farris, P.W., Irvin, J.W., Kushwaha, T., Steenburgh, T.J. and Weitz, B.A. (2010), "Crafting integrated multichannel retailing strategies", *Journal of Interactive Marketing*, Vol. 24 No. 2, pp. 168-180.