

PERCEIVED CONGRUENCE AND ONLINE LOYALTY AS SEGMENTATION VARIABLES IN MULTICHANNEL RETAILING: A COMPARISON BETWEEN APPAREL AND ELECTRONICS

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ABSTRACT

As the interest of the literature on congruity between offline and online stores is relatively recent, empirical evidence is required to help marketing managers choose the most effective ways of contributing to the formation of consistent offerings as well as their contribution to generate customer loyalty. This study examines whether congruity can help to identify segments of heterogeneous consumers that differ significantly regarding these variables as well as other constructs related to the customer relationship with the retailer. The study attempts to identify which congruity attribute(s) are most relevant for differentiating customers by their loyalty towards the online store, so that retailers can design strategies for improving congruity between physical and online stores, and ultimately, increase online store loyalty.

Keywords:

Perceived congruence, online loyalty, multichannel retailing.

1. Introduction

In recent years, there has been a radical change in the channels of distribution with the arrival of online channels and the digitalization of processes in the retail trade. The big retailers have moved to the online world and have openly opted for multichannel strategies. The initial decision on whether new channels should be added, has been overcome by the need to consider aspects such as service evaluation in this new context, customer relationship management across different channels or the integration of strategies and actions across various channels (Verhoef, Kanna & Inman, 2015). Virtually no retail sector has escaped from this trend.

A paradigmatic and successful example of multichannel strategy is that of Zara, the world's largest fashion retailer that began its e-commerce adventure in September 2010. Since then, it has experienced a considerable growth both in the markets in which Zara is selling online - currently more than 40 countries - and in sales volume generated through this channel. Both online stores and the e-commerce division have experienced a sizeable growth, primarily derived from a robust multichannel strategy that allows customers to move seamlessly from the physical to the online channel (Rigby, 2016).

In recent years, the adoption of a multi-channel strategy has become a way to reach a sustainable growth not only by reaching new customers but also increasing the loyalty rates of the existing ones. An adequate multichannel strategy ends up in a sales increase and improves the retailer competitiveness and performance in the long term (Kumar and Venkathesan, 2005; Venkathesan, Kumar & Ravishanker, 2007)

The importance of these new channels in qualitative and quantitative terms means that classic concepts of channel design and management must be rethought within a multichannel context. In this sense, the importance of understanding consumer behavior from an integrated multichannel perspective becomes especially relevant (Jeanpert & Pache, 2016; Neslin & Shankar, 2009; Shareef, Dwivedi & Kumar, 2016) and a major research stream (Verhoef et al., 2015).

The present study aims at examining whether congruity can help to identify segments of heterogeneous consumers that differ significantly regarding loyalty towards the online store as well as other constructs related to the customer experience and relationship with the retailer.

2. Literature review.

It is evident that perceptions, experiences, and behaviors within a channel can affect and modulate behavior in other channels as the successive adoption of new channels takes place (Kwon & Lennon, 2009). As online channels are growing in qualitative and quantitative weight, the decisions about how to manage and achieve synergies between them are becoming critical.

Therefore, it is crucial to understand the role of the different channels along the phases and processes of the purchasing decision process and how to integrate actions in each of them to achieve a positive global experience and improve customers' loyalty. To achieve these objectives, the issues of integration and congruence between distribution channels becomes decisive to build a seamless experience across channels and along all the customer decision journey (Lemon & Verhoef, 2016)

2.1. Multichannel integration and congruence

There is widespread agreement that if multiple channels are integrated and complementary, perceived service quality, satisfaction and loyalty increase (Bendoly, Blocher, Bretthauer, Krishnan & Venkataramanan, 2005; Herhausen, Binder, Schoegel & Hermann, 2015).

Regarding, multi-channel integration, Bendoly et al. (2005) state that the main objective is to provide mutual support and interchangeability of channels for customers. Then integration is defined from the supply side and requires the synergistic combination of different value processes (i.e. inventory systems, warehouse, marketing campaigns), Zhang et al.(2010). As

Bendoly et al. (2005) suggested, integration can expand market coverage, decrease operational costs, and drive positive customer responses to a higher retailer loyalty. Thus, the idea of multichannel integration is to a great extent, related to the combination of functions to gain synergies and be more efficient within the retail value chain.

Congruence is a more demand-oriented concept and it is more a matter of consumer perception. The Merriam-Webster dictionary, defines congruence as “the quality or state of agreeing, coinciding or being congruent,” and congruous as “being in agreement, harmony, or correspondence”. We can start from the idea of congruence as coincidence, accordance and harmony as opposed to conflict or difference. Thus, integration must be understood from the idea of combination and complementarity, while congruence is defined by the global similarity or parallelism between multiple channels.

The issue of congruence in multi-channel marketing has been identified as an important research topic (Gabisch & Gwebu, 2011) and widely considered from a conceptual perspective. Nevertheless, empirical research about its effects on consumer decisions is still scarce (Bezes, 2013). This is particularly true in the case of the online and physical stores comparison.

Bezes (2013) points out the differentiation between congruence and fit. Congruence is based on the relationship or comparison of beliefs about two objects before any kind of evaluation is formed. The fit idea, on the other hand, assumes an evaluative and attitudinal dimension in which evaluations of the similarities and differences that generate the (in)congruence are incorporated. In our case, we will consider the perceived congruence from this last point of view, regardless of the value assessment implications it may have.

Bezos (2013) analyzes the effect of congruence on the retailer image, arriving at the conclusion that this image is improved by the perception of a greater congruence between distribution channels, in this case between the web and the physical stores. This effect is particularly important for consumers who primarily buy online. In a similar way Badrinarayanan, Becerra & Madhavaram (2014), showed a significant and positive relationship between congruency and trust in the online store.

2.2. Online loyalty

Loyalty is one of the key relational outcomes in business to consumer relationships and also one of the more widely discussed in the marketing literature. In his broadly cited paper, Dick and Basu (1994:99) define loyalty as “the strength of the relationship between an individual’s relative attitude and repeat patronage”, reflecting both the attitudinal and behavioral components of the construct.

The growing role of ecommerce participation in retail sales and the particular nature of the online channel as more susceptible to infidelity issues, has put on the lampstand, the concept of e-loyalty and its relationship with physical stores loyalty or, even more, the retailer brand loyalty as a whole. The study of e-loyalty is more recent and not free of controversy regarding conceptual delimitation and measurement (López-Miguens & González, 2017, Toufaily, Ricard, & Perrien, 2013). Nevertheless, the meta-analysis of Toufaily et al. (2013) reveals that the conceptual bases of online loyalty are almost the same to those of offline loyalty. So, we can adopt the concept proposed by López-Minguens & González (2017:399) as “the customer’s willingness to maintain a stable relationship in the future and to engage in a repeat behavior of visits and/or purchases of online products/service, using the company’s website as the first choice among alternatives”.

As we have stated previously, the literature on congruity between offline and online stores is relatively recent, and empirical evidence is required to help marketing managers choose the most effective ways of contributing to the formation of consistent offerings as well as their contribution to generate customer loyalty in a multichannel setting. In this sense, as Neslin & Shankar (2009) pointed out, consumer segmentation is a critical issue for understanding consumers in a multichannel environment, and has gained attention in recent years within the academic field (Verhoef et al., 2015). Badrinarayanan et al. (2014) advocate for identifying

store-related attributes that could be salient to different online shopper segments for establishing and communicating consistency.

In view of the above presented evidence, we propose the following research questions:

RQ1: Are congruence attributes useful to differentiate segments of apparel/electronics consumers regarding their degree of loyalty towards the online store of the multichannel retailer?

RQ2: If yes, which are the congruence attributes most influencing online loyalty in apparel/electronics multichannel retail settings?

4. Method

To respond to the above-mentioned research questions, we conducted a quantitative research in the context of multichannel consumers' perceptions about their purchase experiences in the physical and the online store of an apparel or an electronics retailer. An online *ad-hoc* survey was developed based on a structured questionnaire. The questionnaire was designed from a set of scales carefully selected from the literature and adapted to the context of physical and/or online retailing. In particular, the scale for online and offline loyalty has been adapted from Jin et al. (2010); items to measure congruency have been adapted from Badrinarayanan et al. (2014); the items for measuring offline/online service quality and online/offline cost have been adapted from Fernández-Sabiote and Román (2012), whereas the offline/online value scale is based on the proposal of Arnett et al. (2003). Offline/online satisfaction scales are adapted from Chen and Cheng (2013) and Jin et al. (2010); involvement with the product is measured according to Mittal and Lee (1989), shopping enjoyment following Konus et al. (2008) and convenience as per Schröder and Zaharia (2008). All these measures used 7-point Likert-type scales. In addition to this, items for assessing showrooming/webrooming behaviors and share of wallet are proposed by the authors. A pre-test was performed to assess the reliability of the adapted instrument.

To obtain a representative sample of the Spanish population of multichannel retail customers, a quota sampling procedure has been applied to select consumers according to the gender and age quotas of apparel and electronics online shoppers as per the last available data at the Spanish Institute of Statistics (INE, 2017). Data collection was supported by a Spanish market research firm that manages a consumer panel composed by registered users from all around the country and varied sociodemographic characteristics. 401 and 402 valid online questionnaires were collected from apparel and electronics multichannel retail customers, respectively. The socio-demographic characteristics of both samples are shown in Table 1.

TABLE 1
Sample profile

Classification variables	Apparel		Electronics		Classification variables	Apparel		Electronics	
	N	%	N	%		N	%	N	%
Gender					Occupation				
Male	181	45.1	260	64.7	Employee	232	57.9	227	56.5
Female	220	54.9	142	35.3	Employer	34	8.5	38	9.5
					Student	60	15.0	44	10.9
					Unemployed	30	7.5	30	7.5
					Housewife	15	3.7	6	1.5
					Pensioner	30	7.5	57	14.2
Age					Income (euro)				
18-24	92	22.9	73	18.2	No income	36	9.0	25	6.2
25-34	80	20.0	80	19.9	< 1,000 euro	77	19.2	67	16.7
35-44	81	20.2	81	20.1	1,000-2,000 euro	144	35.9	162	40.3
45-54	68	17.0	64	15.9	2,001-3,000 euro	47	11.7	55	13.7
55-64	48	12.0	56	13.9	>3,000 euro	16	4.0	17	4.2
> 64	32	8.0	48	11.9	NA	81	20.2	76	18.9
Educational level					Residence town size				
No studies	1	0.2	1	0.2	< 2,000 inhabitants	17	4.2	14	3.5
Primary studies	30	7.5	23	5.7	2,000-10,000 inhab.	55	13.7	43	10.7
Secondary studies	68	17.0	63	15.7	10,001-100,000 inhab.	109	27.2	127	31.6

Vocational training	80	20.0	96	23.9	100,001-500,000 inhab.	92	22.9	104	25.9
Bachelor/Degree	171	42.6	167	41.5	> 500,000 inhab.	112	27.9	108	26.9
Postgraduate	51	12.7	52	12.9	NA	16	4.0	6	1.5

With the collected data, an Automatic Interaction Detection (AID) analysis was conducted considering online store loyalty as the key variable in the segmentation process. The AID is a statistical analysis technique used to analyze the relation of dependency between a dependent variable and several independent or explanatory variables. It operates sequentially through analysis of variance, dividing the sample into homogenous subgroups to maximize inter-group variance and minimize intra-group variance (Kass, 1980). This process identifies the independent variables that contribute the most to explaining the variability in the dependent variable. In the present study, CHAID has been used to characterize customer loyalty towards the online store based on the congruity perceptions between land-based and online stores. This analysis is expected to provide heterogeneous segments that differ significantly in terms of the dependent and independent variables, as well as other variables.

In contrast to cluster analysis, that has been widely used for retail customer segmentation (e.g. Mortimer, 2013), the CHAID algorithm has been considered the most appropriate technique for selecting the most meaningful or important segmentation variables, that is, the ones that come first when segmenting large samples (Chung et al., 2004). Despite the benefits of CHAID, this technique has rarely been used in the literature on retail customer segmentation (e.g. Cooil et al., 2008; Molenaar, 2013).

The segments resulting from the CHAID algorithm are compared through an analysis of variance (ANOVA) regarding other numerical variables and through contingency tables for nominal variables. Thus, it can be determined whether the subjects belonging to each group constitute a customer segment and whether they behave in a significantly different way in relation to variables that have not been considered for the CHAID. Finally, the distinguishing features of the customer segments are identified.

5. Results

A CHAID algorithm was used to classify multichannel customers based on their loyalty to the online store and several attributes for assessing congruity between the online and the land-based store. Loyalty towards the online store is the dependent variable, while 23 attributes for assessing congruity between the online and the land-based store, are introduced in the algorithm as independent variables. All the variables were scored on a scale from 1 to 7. The results are shown graphically in Figure 1 and numerically for each node in Table 2.

FIGURE 1
Classification tree generated by CHAID algorithm. Apparel

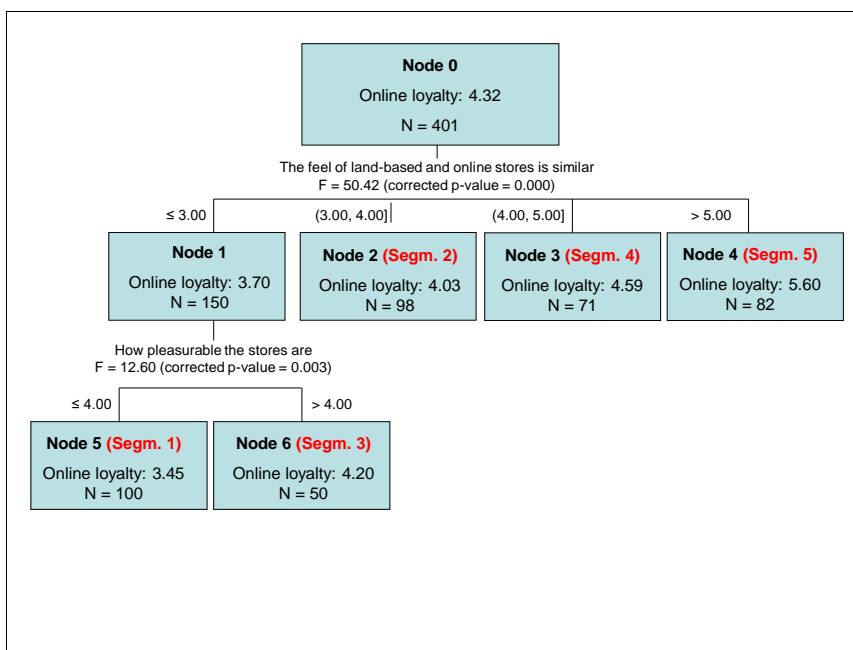


TABLE 2
Descriptive statistics of the nodes obtained with CHAID algorithm. Apparel

Node	Final segment	Size	Average Online loyalty	Stand. Dev.	Characteristics
0	-	401	4.324	1.366	-
1	-	150	3.695	1.266	- The feel of land-based and online stores is similar ≤ 3.00
2	2	98	4.028	1.113	- The feel of land-based and online stores is similar (3.00, 4.00]
3	4	71	4.592	1.119	- The feel of land-based and online stores is similar (4.00, 5.00]
4	5	82	5.598	1.077	- The feel of land-based and online stores is similar > 5.00
5	1	100	3.445	1.198	- The feel of land-based and online stores is similar ≤ 3.00 - How pleasurable the stores are ≤ 4.00
6	3	50	4.195	1.262	- The feel of land-based and online stores is similar ≤ 3.00 - How pleasurable the stores are > 4.00

Risk estimate: 1.302. Standard error: 0.108

As can be seen, the CHAID algorithm generates five final segments of multichannel consumers. To further characterize each final segment, we test the significance of the differences between segments regarding the dependent and the independent variables of the CHAID algorithm (i.e. loyalty towards the online store and congruity perceptions between online and physical stores). Average values for each segment and the values of the ANOVA test are shown in Table 3.

TABLE 3
CHAID variables, online-offline perceptions and shopping motivations: Average values and significant differences across segments. Apparel

	Seg.1	Seg.2	Seg.3	Seg.4	Seg.5	F
<i>Dependent variable: Online loyalty</i>	3.44	4.03	4.19	4.59	5.60	42.6 ^a
<i>Independent variables</i>						
<i>Aesthetic appeal (AP)</i>						
The feel of the stores	2.14	4.00	2.52	5.00	6.26	933.1 ^a
The visual images used	3.13	4.28	4.32	4.56	5.55	41.6 ^a
Display of products in store	2.85	3.94	3.48	4.61	5.51	53.8 ^a
<i>Navigation convenience (NC)</i>						

Ease of finding what you looking for / ...	3.14	3.99	3.98	4.69	5.63	41.5 ^a
Ease of navigating around store	3.10	3.98	4.08	4.69	5.52	40.0 ^a
Extend to which stores are organized	3.15	3.84	3.58	4.55	5.63	50.8 ^a
Transaction convenience (TC)						
Ease of purchasing items in stores	3.44	4.24	4.64	4.87	5.70	33.5 ^a
Ease of paying for items in stores	4.01	4.45	4.68	5.23	6.10	30.7 ^a
Ease of completing transactions in stores	3.60	4.47	4.66	4.82	5.83	36.0 ^a
Atmosphere (AT)						
How fun the stores are	3.14	4.11	4.32	4.59	5.49	49.3 ^a
How attractive the stores are	3.10	4.44	4.72	4.87	5.78	65.4 ^a
How pleasurable the stores are	2.94	4.44	5.50	4.96	5.87	110.1 ^a
Service Congruency (SVC)						
How friendly the service is	2.61	3.96	4.04	4.68	5.37	61.3 ^a
How helpful the service is	3.43	4.29	4.60	4.96	5.74	47.4 ^a
How good the service is	3.94	4.67	5.18	4.94	5.85	27.2 ^a
How knowledgeable the service providers are	3.24	4.11	4.24	4.86	5.49	45.0 ^a
How fast the service is	3.10	3.92	4.00	4.76	5.44	38.1 ^a
Price orientation Congruency (PO)						
The availability of special deals	3.45	4.02	3.76	4.90	5.24	25.8 ^a
Notices about sales or new products	3.23	3.98	4.08	4.61	5.57	42.0 ^a
The frequency of sales or special deals	3.52	4.11	4.14	4.86	5.71	36.2 ^a
Security Congruency (SCT)						
The safety offered by stores	3.92	4.48	5.20	5.07	5.94	29.5 ^a
The security provided for shoppers	4.15	4.64	5.18	5.23	5.91	22.6 ^a
The security provided for transactions	4.19	4.72	5.18	5.27	6.15	30.1 ^a
Off-online perceptions and behavior						
Offline loyalty	Seg.1	Seg.2	Seg.3	Seg.4	Seg.5	F
Offline loyalty	4.06	4.46	5.06	4.80	5.63	21.1 ^a
Offline service quality	4.90	5.36	5.66	5.44	5.93	7.1 ^a
Online service quality	4.66	5.21	5.56	5.22	6.14	23.2 ^a
Offline cost	3.42	3.55	3.26	3.38	3.14	1.2
Online cost	3.41	3.34	2.87	3.50	2.90	3.5 ^a
Offline value	4.81	4.87	5.38	5.02	5.67	9.3 ^a
Online value	4.67	4.71	5.31	4.95	5.81	18.5 ^a
Offline satisfaction	4.94	5.27	5.72	5.34	6.04	12.9 ^a
Online satisfaction	4.61	4.83	5.61	5.19	6.11	28.1 ^a
Shopping motivations						
Involvement	4.36	4.29	4.94	4.73	5.11	5.8 ^a
Enjoyment	5.05	5.07	5.50	5.17	5.52	2.8 ^b
Convenience	4.65	4.47	4.86	4.86	4.78	1.8
% consumers	24.9	24.4	12.5	17.7	20.4	

^{a, b, c} Statistically significant at 1%, 5% and 10%, respectively.

Regarding the dependent variable for the CHAID algorithm, that is, loyalty towards the online store, it is observed that the first segment shows a significantly lower average value in comparison to the other segments. Customers in this segment are characterized by the lowest values for all attributes related to congruity between online and physical stores. In contrast, the fifth segment shows the highest value for online loyalty as well as the highest scores for all items used to measure congruity. Intermediate values for all the items are observed for the other three segments.

Since congruity in perceived feelings and pleasure experienced in online and offline stores emerge as the key segmenting variables of the CHAID algorithm, these are the items used to assess congruity with the widest differences across segments, so that the first segment – i.e. low online loyalty - shows the lowest scores for all items to measure congruity between online and offline stores, whereas the fifth segment – i.e. high online loyalty – shows the highest scores for all items used to measure congruity. The other three segments show intermediate scores in congruity items.

To complete segment characterization, we analyze other constructs that the literature relates to online loyalty, but were not considered for the CHAID algorithm, that is, customer perceptions of the online and offline stores and behavior in both settings. Consistently with differences between segments in terms of online loyalty, values for offline loyalty, offline and online service quality evaluations, online and offline value perceptions and offline and online satisfaction are the lowest for the first segment, and the highest for the fifth segment.

Notwithstanding, online cost shows the highest score for Segment 4, while the lowest is for Segment 3. Offline cost shows no significant differences.

Concerning shopping motivations, Segments 3 and 5 shows the highest levels of involvement in the product category and enjoyment, while the lowest scores are for Segments 1 and 2. To complete the characterization of the customer segments, Table 4 shows the distribution of consumers in each segment regarding offline and online behavior, patterns of expenditure in the product category and e-commerce, expertise buying online and the main sociodemographic characteristics.

TABLE 4
Offline/online behavior variables and personal characteristics: Contingency tables. Apparel

	Seg.1	Seg.2	Seg.3	Seg.4	Seg.5	Chi2
Offline/Online behavior variables (%)						
Search online + Buy online	18.0	10.2	14.0	9.9	15.9	31.8 ^b
Search offline + Buy online	2.0	6.1	4.0	8.5	9.8	
Search online + Buy offline	31.0	24.5	42.0	25.4	31.7	
Search online + See/try offline + Buy online	12.0	19.4	14.0	28.2	26.8	
Search offline + Buy offline	37.0	39.8	26.0	28.2	15.9	
Percentage of apparel expenditure on total expenditure						42.7 ^b
< 5%	8.0	8.2	4.0	8.5	3.7	
5-10%	22.0	20.4	12.0	14.1	14.6	
11-20%	33.0	27.6	32.0	26.8	31.7	
21-30%	27.0	19.4	20.0	26.8	14.6	
31-40%	4.0	12.2	18.0	9.9	14.6	
41-50%	5.0	3.1	12.0	5.6	17.1	
>50%	1.0	9.2	2.0	8.5	3.7	
Percentage of expenditure in this retailer's stores on total apparel expenditure						42.0 ^b
< 5%	32.0	27.6	24.0	22.5	9.8	
5-10%	26.0	28.6	32.0	21.1	28.0	
11-20%	20.0	16.3	16.0	16.9	12.2	
21-30%	12.0	12.2	6.0	21.1	14.6	
31-40%	6.0	5.1	10.0	8.5	12.2	
41-50%	1.0	5.1	8.0	5.6	7.3	
>50%	3.0	5.1	4.0	4.2	15.9	
Percentage of apparel expenditure in online stores on total apparel expenditure						46.6 ^a
< 5%	46.0	28.6	24.0	29.6	14.6	
5-10%	22.0	32.7	22.0	22.5	28.0	
11-20%	12.0	11.2	20.0	18.3	22.0	
21-30%	11.0	7.1	14.0	16.9	11.0	
31-40%	3.0	2.0	8.0	1.4	9.8	
41-50%	4.0	7.1	8.0	5.6	8.5	
>50%	2.0	11.2	4.0	5.6	6.1	
Years buying online/using e-commerce						21.4 ^b
< 1	3.0	5.1	2.0	4.2	2.4	
1-3	22.0	35.7	38.0	39.4	30.5	
4-6	36.0	43.9	28.0	26.8	34.1	
> 6	39.0	15.3	32.0	29.6	32.9	
Socio-demographic variables (%)	Seg.1	Seg.2	Seg.3	Seg.4	Seg.5	Chi2
<i>Gender</i>						2.29
- male	42.0	51.0	44.0	46.5	41.5	
- female	58.0	49.0	56.0	53.5	58.5	
<i>Age</i>						16.8
- 18-24	22.4	22.5	26.8	16.0	32.0	
- 25-34	20.4	21.1	17.1	19.0	24.0	
- 35-44	19.4	21.1	14.6	25.0	20.0	
- 45-54	19.4	15.5	13.4	19.0	16.0	
- 55-64	10.2	14.1	15.9	12.0	6.0	
- older than 65	8.2	5.6	12.2	9.0	2.0	

<i>Educational level</i>						14.1
No studies	0.0	0.0	0.0	0.0	1.2	
Primary studies	6.0	9.2	4.0	7.0	9.8	
Secondary studies	13.0	20.4	20.0	14.1	18.3	
Vocational training	17.0	20.4	18.0	22.5	22.0	
Bachelor/Degree	47.0	37.8	50.0	42.3	39.0	
Postgraduate	17.0	12.2	8.0	14.1	9.8	
% consumers	24.9	24.4	12.5	17.7	20.4	

^{a, b, c} Statistically significant at 1%, 5% and 10%, respectively.

Strong associations have been found between segments and offline and online behavior, patterns of expenditure in the product category and e-commerce, and expertise buying online. In particular, regarding showrooming/webrooming behavior, the first segment shows a higher percentage of customers searching and buying online (18%) and searching and buying offline (37%) than other segments. This finding can be understood as an evidence of a lock-in effect for this group of consumers. Most of consumers in Segment 2 (39%) search and buy offline. Segment 3 shows the highest percentage of consumers searching online and buying offline, consistently to their higher scores in involvement and enjoyment. Segment 4 is the one most appreciating the highest online cost and showing the lowest percentage of consumers searching and buying online, so that they seem highly dependent on land-based stores in the different steps of the purchasing process. Last, Segments 4 and 5 show the highest percentage of consumers searching online, seeing/trying offline and buying online, that is consistent with their high perceptions of congruity between online and offline stores. This result is consistent with Bezes (2013).

As far as share of wallet is concerned, 32% of consumers in Segment 3 spend more than 30% of their total expenditure in apparel, consistently with their high scores in involvement. In contrast, 58% of respondents in Segment 1 spend less than 10% of total apparel expenditure in the appointed retailer, and 46% spend less than 5% of apparel expenditure online. 39% of consumers in Segment 1 have more than 6 years of experience buying online, while this percentage is only 15.3 for Segment 2.

Concerning sociodemographics, no significant associations with segments have been found for gender, age, educational level, occupation, income or residence town size.

All in all, we can define the first segment as a **Low congruity-low online loyalty** group of consumers, that also have poor perceptions of service quality in online and offline stores. Segment 2 could be defined as **Utilitarian**, in view of their low levels of involvement and enjoyment. Segment 3 could be considered as a **Hedonic** segment, while Segment 4 are **Land-based dependent consumers**, and Segment 5 is the **High congruity-high loyalty** group of multichannel consumers.

Similarly, a CHAID analysis is performed for Electronics multichannel consumers. Figure 2 and Table 5 provide the results obtained graphically and numerically, respectively.

FIGURE 2
Classification tree generated by CHAID algorithm. Electronics

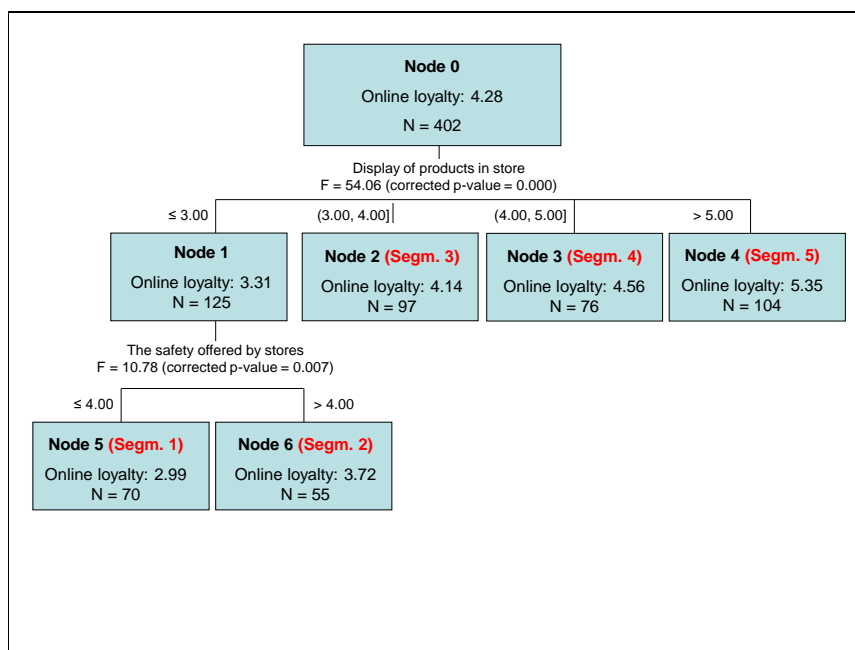


TABLE 5
Descriptive statistics of the nodes obtained with CHAID algorithm. Electronics

Node	Final segment	Size	Average Online loyalty	Stand. Dev.	Characteristics
0	-	402	4.275	1.449	-
1	-	125	3.310	1.294	- Display of products in store ≤ 3.00
2	3	97	4.144	1.175	- Display of products in store (3.00, 4.00]
3	4	76	4.562	1.111	- Display of products in store (4.00, 5.00]
4	5	104	5.346	1.267	- Display of products in store > 5.00
5	1	70	2.986	1.299	- Display of products in store ≤ 3.00 - The safety offered by stores ≤ 4.00
6	2	55	3.723	1.173	- Display of products in store ≤ 3.00 - The safety offered by stores > 4.00

Risk estimate: 1.446. Standard error: 0.110

As for Apparel, the CHAID algorithm generates five final segments of multichannel electronics consumers. Notwithstanding, on this case “Display of products in store” and “The safety offered by stores” are the most relevant congruity attributes that segment consumers in terms of their loyalty towards the online stores. Average values for each segment and the values of the ANOVA test for CHAID and non-CHAID variables are shown in Table 6.

TABLE 6
CHAID variables, online-offline perceptions and shopping motivations: Average values and significant differences across segments. Electronics

	Seg.1	Seg.2	Seg.3	Seg.4	Seg.5	F
Dependent variable: Online loyalty	2.99	3.72	4.14	4.56	5.35	44.5 ^a
Independent variables						
<i>Aesthetic appeal (AP)</i>						
The feel of the stores	2.73	3.33	3.79	4.50	5.38	58.8 ^a
The visual images used	3.11	3.62	4.18	4.92	5.83	74.3 ^a
Display of products in store	2.26	2.29	4.00	5.00	6.23	986.2 ^a
<i>Navigation convenience (NC)</i>						
Ease of finding what you looking for / ...	3.03	4.04	4.08	4.71	5.57	41.3 ^a
Ease of navigating around store	2.96	3.47	4.07	4.78	5.43	54.9 ^a
Extend to which stores are organized	2.96	3.65	4.19	4.89	5.61	62.1 ^a
<i>Transaction convenience (TC)</i>						
Ease of purchasing items in stores	3.16	3.87	4.16	4.97	5.72	54.4 ^a

Ease of paying for items in stores	3.49	5.04	4.43	5.20	5.73	32.2 ^a
Ease of completing transactions in stores	3.34	4.65	4.28	5.12	5.61	37.0 ^a
<i>Atmosphere (AT)</i>						
How fun the stores are	3.09	3.73	3.96	4.76	5.29	43.3 ^a
How attractive the stores are	3.21	3.96	4.10	4.89	5.53	45.7 ^a
How pleasurable the stores are	3.53	4.04	4.22	5.07	5.74	53.1 ^a
<i>Service Congruency (SVC)</i>						
How friendly the service is	2.94	3.11	3.88	4.68	5.36	53.3 ^a
How helpful the service is	3.33	4.15	4.20	4.80	5.61	43.7 ^a
How good the service is	3.51	4.73	4.41	5.09	5.86	45.2 ^a
How knowledgeable the service providers area	2.97	3.76	4.06	4.68	5.53	52.6 ^a
How fast the service is	3.06	3.53	4.06	4.79	5.41	42.9 ^a
<i>Price orientation Congruency (PO)</i>						
The availability of special deals	3.41	3.55	4.07	4.64	5.67	45.7 ^a
Notices about sales or new products	3.24	3.53	4.22	4.63	5.63	50.2 ^a
The frequency of sales or special deals	3.70	3.84	4.15	4.64	5.59	35.6 ^a
<i>Security Congruency (SCT)</i>						
The safety offered by stores	2.80	5.78	4.54	5.05	5.84	103.6 ^a
The security provided for shoppers	3.51	5.45	4.47	5.01	5.86	50.1 ^a
The security provided for transactions	3.49	5.47	4.58	5.04	5.89	53.4 ^a
Off-online perceptions and behavior	Seg.1	Seg.2	Seg.3	Seg.4	Seg.5	F
Offline loyalty	4.15	4.18	4.05	4.82	5.28	18.0 ^a
Offline service quality	4.81	5.34	4.87	5.22	5.65	5.7 ^a
Online service quality	4.20	4.88	4.66	5.22	5.92	32.1 ^a
Offline cost	3.35	3.60	3.63	3.67	3.42	0.9
Online cost	3.64	3.10	3.48	3.52	3.44	1.4
Offline value	4.80	5.09	4.79	5.20	5.51	7.7 ^a
Online value	4.56	4.91	4.70	5.24	5.73	19.8 ^a
Offline satisfaction	5.01	5.31	4.76	5.43	5.73	11.7 ^a
Online satisfaction	4.18	4.85	4.66	5.23	5.81	29.0 ^a
Involvement	5.61	5.81	5.37	5.45	5.86	3.0 ^b
Enjoyment	5.61	5.87	5.26	5.63	6.09	7.9 ^a
Convenience	4.21	4.46	4.46	4.67	4.87	3.8 ^a
% consumers	17.4	13.7	24.1	18.9	25.9	

^{a, b, c} Statistically significant at 1%, 5% and 10%, respectively.

As for Apparel multichannel consumers, the first segment – i.e. low online loyalty - shows the lowest scores for all items to measure congruity between online and offline stores, whereas the fifth segment – i.e. high online loyalty – shows the highest scores for all items used to measure congruity. Segment 3 is the one showing the lowest levels of involvement and enjoyment, as well as offline loyalty, whereas Segment 2 shows high scores in these shopping motivations.

Concerning the distribution of consumers in each segment regarding offline and online behavior, patterns of expenditure in the product category and e-commerce, expertise buying online and the main sociodemographic characteristics (Table 7), only significant associations have been found for percentage of electronics expenditure on total expenditure ($p < 0.05$) and percentage of apparel expenditure in online stores on total electronics expenditure ($p < 0.10$). In particular, 54.3% consumers in Segment 1 spend less than 10% of their total expenditure in electronics, while this percentage is 31.7% for Segment 5. Segment 1 shows also the highest percentage of consumers buying less than 5% of total electronics expenditure in online stores. Sociodemographic characteristics do not seem to be associated with segment number.

TABLE 7

Offline/online behavior variables and personal characteristics: Contingency tables. Electronics

	Seg.1	Seg.2	Seg.3	Seg.4	Seg.5	Chi2
<i>Offline/Online behavior variables (%)</i>						
Search online + Buy online	11.4	21.8	18.6	15.8	18.3	15.8
Search offline + Buy online	0.0	1.8	5.2	7.9	6.7	
Search online + Buy offline	51.4	36.4	36.1	39.5	31.7	
Search online + See/try offline + Buy online	25.7	30.9	27.8	28.9	33.7	
Search offline + Buy offline	11.4	9.1	12.4	7.9	9.6	
Percentage of electronics expenditure on total expenditure						37.6 ^b
< 5%	14.3	14.5	14.4	6.6	6.7	
5-10%	40.0	20.0	26.8	31.6	25.0	

11-20%	22.9	30.9	28.9	23.7	20.2	
21-30%	5.7	14.5	16.5	22.4	20.2	
31-40%	8.6	9.1	6.2	5.3	18.3	
41-50%	5.7	5.5	6.2	6.6	2.9	
>50%	2.9	5.5	1.0	3.9	6.7	
Percentage of expenditure in this retailer's stores on total electronics expenditure						31.3
< 5%	35.7	34.5	24.7	17.1	13.5	
5-10%	25.7	23.6	22.7	27.6	28.8	
11-20%	10.0	20.0	23.7	25.0	19.2	
21-30%	5.7	5.5	9.3	14.5	13.5	
31-40%	4.3	5.5	4.1	5.3	9.6	
41-50%	7.1	3.6	4.1	5.3	6.7	
>50%	11.4	7.3	11.3	5.3	8.7	
Percentage of apparel expenditure in online stores on total electronics expenditure						33.8 ^c
< 5%	34.3	21.8	23.7	13.2	22.1	
5-10%	21.4	29.1	20.6	31.6	26.0	
11-20%	12.9	9.1	24.7	22.4	20.2	
21-30%	2.9	9.1	5.2	11.8	4.8	
31-40%	5.7	7.3	7.2	9.2	13.5	
41-50%	12.9	10.9	10.3	2.6	5.8	
>50%	10.0	12.7	8.2	9.2	7.7	
Years buying online/using e-commerce						10.4
< 1	4.3	11.8	7.2	2.6	1.9	
1-3	21.4	21.8	24.7	31.6	26.9	
4-6	40.0	40.0	27.8	34.2	32.7	
> 6	34.3	36.4	40.2	31.6	38.5	
Socio-demographic variables (%)	Seg.1	Seg.2	Seg.3	Seg.4	Seg.5	Chi2
<i>Gender</i>						2.29
- male	42.0	51.0	44.0	46.5	41.5	
- female	58.0	49.0	56.0	53.5	58.5	
<i>Age</i>						16.8
- 18-24	22.4	22.5	26.8	16.0	32.0	
- 25-34	20.4	21.1	17.1	19.0	24.0	
- 35-44	19.4	21.1	14.6	25.0	20.0	
- 45-54	19.4	15.5	13.4	19.0	16.0	
- 55-64	10.2	14.1	15.9	12.0	6.0	
- older than 65	8.2	5.6	12.2	9.0	2.0	
<i>Educational level</i>						14.1
No studies	0.0	0.0	0.0	0.0	1.2	
Primary studies	6.0	9.2	4.0	7.0	9.8	
Secondary studies	13.0	20.4	20.0	14.1	18.3	
Vocational training	17.0	20.4	18.0	22.5	22.0	
Bachelor/Degree	47.0	37.8	50.0	42.3	39.0	
Postgraduate	17.0	12.2	8.0	14.1	9.8	
% consumers	24.9	24.4	12.5	17.7	20.4	

^{a, b, c} Statistically significant at 1%, 5% and 10%, respectively.

In general, similar segments of multichannel consumers emerge both for Apparel and Electronics, and congruity seems to be strongly associated with online loyalty. The latter seems to be strongly related to offline loyalty, as well as the perceptions of online and offline stores, and shopping motivations.

5. Conclusions, managerial implications and limitations

Both academics and practitioners emphasize the need to segment consumers to guarantee the effectiveness of retailers' marketing policies in a highly competitive environment. In this way, the present paper is intended to contribute to research into congruence between offline and online stores, exploring the use of this construct and its attributes as segmentation variables for retail customers.

The results of the present study suggest that congruence attributed may contribute to defining multichannel customer segments and facilitate managers' decision making regarding marketing policies. In this sense, apparel retailers may concentrate in redesign their online and/or physical stores using sensorial marketing techniques to guarantee the consistency between the feelings

and pleasure experienced by consumers both in the online and offline settings, since they emerge as the most relevant factors contributing to differentiate loyal customers towards the online store from other segments of consumers. Regarding electronics, multichannel retailers should concentrate their efforts on improving consistency between how merchandise is organized and presented, as well as safety offered by online and offline stores.

Despite these differences between apparel and electronics multichannel retail settings, the CHAID algorithm produced five customer segments in both cases, that show important similarities: Customers showing the lowest online loyalty levels have the poorest perceptions on multichannel retailer congruence, while the highly loyal customers towards the online store show the highest scores in all congruence attributes. Therefore, online loyalty and congruence between online and land-based stores seem closely related. In view of the familiarity with e-commerce of the segment of highly loyal consumers, in the line of Zentes et al. (2011), we suggest retailers should adopt a relationship marketing approach, creating marketing programs that formally take advantage of positive WOM from loyal customers and turn them into brand ambassadors, using the multiplier effect of electronic media, online reviews and blogging, among others (O'Brien, 2011).

Moreover, segments of hedonic and utilitarian consumers are identified, being a priority for multichannel retailers to attract hedonic consumers in view of their high involvement with the product purchase and share of wallet in the product category.

From a theoretical perspective, this paper provides evidence for the usefulness of the CHAID algorithm for identifying the most relevant factors explaining differences in online loyalty across customer segments. In comparison to the widely-used cluster analysis, the CHAID technique does not only generate relevant customer segments but also sequentially identifies the main variables contributing to explain differences across customers in the key variable (i.e. congruence attributes, in this case). Thus, the identification of the most relevant congruence attributes through the CHAID algorithm provides academics with an explanation of store choice by segmenting customers based on their loyalty towards the online store, while also assisting store managers with strategy definition.

Notwithstanding, the present study is not free from limitations. First, the eligibility of the sample elements was subject to their membership to a particular panel of consumers, and the respondent availability to fill in the online survey within a few days after receiving the panel invitation by e-mail. Second, an additional concern is related to the fact that the results are based on the responses reported by the candidate (self-reported data), so they may be questionable based on problems related to the common method bias, such as consistency motif or social desirability (Podsakoff et al., 2003). Further research should consider to possibility to combine surveys with data on actual purchases.

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